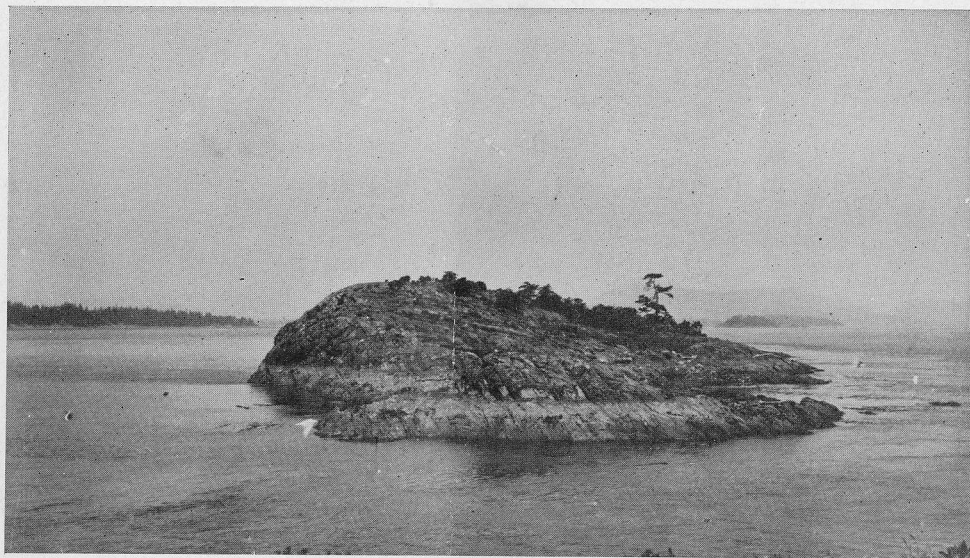


The
**VICTORIA
NATURALIST**

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November, 1945



BARE ISLAND BIRD SANCTUARY
near Sidney (V. I.) B. C.



THE VICTORIA NATURALIST

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The Victoria Natural History Society

The regular monthly meeting of the Society was held in the Reading Room of the Provincial Library on Tuesday the 9th October with Mr. J. F. Palmer acting as Chairman. Mr. Geo. Winkler showed a portion of a stalactite from a limestone cave at the western end of Horne Lake, V. I., the gift of Mrs. J. Thomson of Dunsmuir. A short article on the formation of these stalactites appears in this issue. Mr. G. A. Hardy then gave a talk on -

Mushrooms and Toadstools

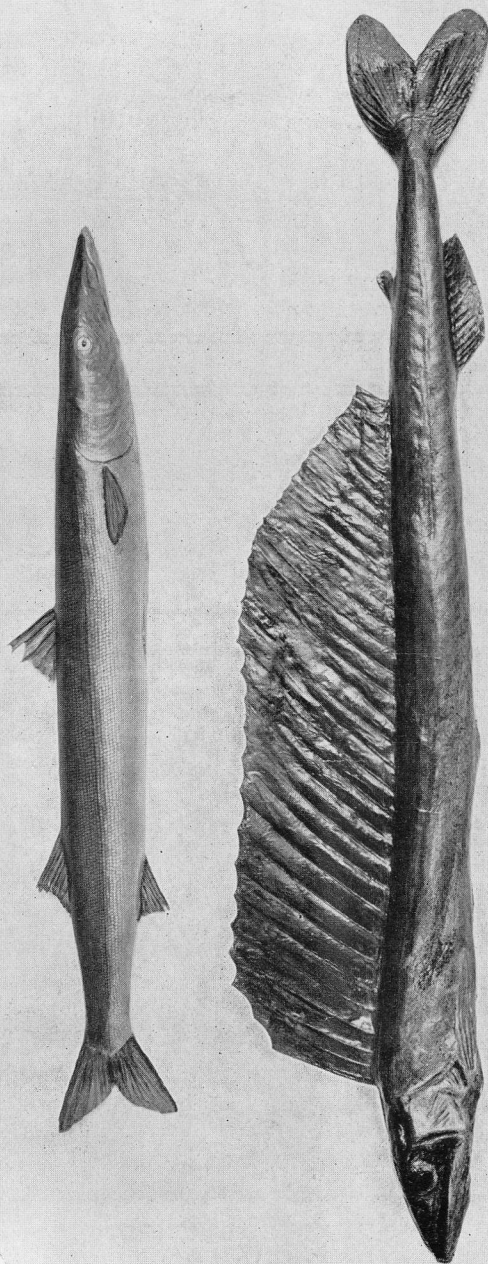
By way of introduction to the topic, Mr. Hardy pointed out that the class of plants known as the Fungi, to which mushrooms and toadstools belong, has had a fundamental effect upon the destinies of Man, exemplified on the one hand by the potato famine of 1848 in Ireland, the cause of deep distress and of wholesale migrations to the New World; and on the other by penicillin, the new life-saver extracted from a variety of bread mold. The fungus diseases of plants are more potent for destruction than insect pests, and necessitate the services of an army of plant pathologists to protect the food crops of the world.

Plants in general have the ability to synthesize food from the elements with the aid of the green pigment chlorophyll, but the fungi, lacking this pigment, are dependent upon living or dead material formed by other plants for their food. In the matter of growth conditions the fungi flourish best in moderately damp surroundings, but are tolerant of extreme ranges of altitude and light. They achieve wide dispersal through the very excellent mechanism of their spores which are carried to great altitudes and over enormous distances by air currents.

Common names of plants are the outgrowth of the folklore of a people, and the word "mushroom" was the ancient designation applied to the well-known edible form. All other types of fungus with prominent fruiting bodies

(Bottom) HANDSAW FISH (*Alepidosaurus aesculapius*)

(Top) BARRACUDA. (*Sphyraena argentea*)



were known as toadstools and regarded with deep suspicion, although it is now known that the great majority of them are innocuous, although many lack any attractive qualities that would bring about their inclusion in our diet.

The visible portion of a mushroom is only the fruiting body. The plant starts as a spore, given off by the parent plant, which lands upon some suitable substratum and gives off minute branching threads or hyphae, which collectively form the white mass known as mycelium. The mycelium spreads through the underground food material, and periodically forms numerous small "buttons" which grow egg-shaped and burst above the ground and split horizontally, the upper part forming the familiar "umbrella" of the mushroom whose under surface bears the spore-producing mechanism. The fruiting body is ephemeral in nature, but the mycelium is often exceedingly long-lived, having been known to last for six hundred years. The outward extension of a circle of growing mycelium accounts for the "fairy-rings" often seen in grass. The rapid growth of the visible portion is due to the fact that in the button stage, all the cells of the mature umbrella are present, but in a collapsed condition. As they fill with sap under great internal pressure, they inflate and produce a rapid increase in size.

As to the distinction between poisonous and non-poisonous varieties, it was pointed out that common tests, such as peeling the cap, or boiling with a silver spoon, have no validity, and it is necessary to know the specific characters of the toxic species. Any local mushroom with white gills that has both a velum and a basal cup should be considered harmful.

One enormously important service rendered by the fungi in general is the promotion of decay in dead plant matter, which releases food compounds for re-use.

Following the address, a large number of fresh specimens were displayed, and their characteristics pointed out.

L. Colin Curtis.

REPORT OF FIELD MEETINGS OF THE ORNITHOLOGICAL GROUP
----- 1945 -----

Five afternoons during the season were spent in listening for and looking up the birds. On April 14th members met at Burnside Bridge, Colquitz River. Skylarks sang well in spite of chill and wind. Down the creek one Audubon Warbler, a hen bird, was seen in the willows, several Killdeers and Violet-green Swallows. Up the creek California Purple Finches were seen. The party then moved to Beaver Lake where Buffle-heads and Mallards were seen on the water; seen in the woods and outskirts were Oregon Towhees, Pileolated Woodpeckers. Those heard were Lutescent Warblers, Sooty Grouse, Solitary Vireos, Bewicks Wrens, 18 varieties in all.

On May 5th a large party met at the home of Mr. & Mrs. G.A. Hardy, Braefoot; they made a circuit of road, lane and fields. Twenty-five species of bird were seen and heard. Rufous Hummingbirds displayed themselves on telephone wires, several Warblers were singing in the lane, amongst them Macgillivray's. A good view was obtained of two Bald Eagles and two Bussards overhead. Amongst the grass-hummocks of a low-lying field a flock of about 20 Pipits on migration were feeding.

On May 12th a few members of the group joined the Zoological group at the home of Col. and Mrs. Woodward, Miller Ave. Leaves were fully out and a few birds were seen. Townsend Warblers conspicuous in yellow and black were watched as they sang in the fir-tops. In the garden of Mr. & Mrs. R. Layritz nearby, members were delighted with the sight of a three-decker nest of a Hummingbird set into the bough of a cedar.

On May 19th the group were guests of Mr. & Mrs. K. Christiansen, Old Saanich Road. Twenty-one varieties were seen. After viewing the Iris garden and the nest in an oak of a Rufous Hummer, the party rambled down to the shore of Swan Lake: Two Great Blue Herons rose from the edge of the pond, Coots and Mallards were on the water also one Baird's Cormorant. Blackheaded Grosbeaks were singing well and were followed and watched with considerable interest by all. In the evening having returned to the Christiansen home members watched Grosbeaks and warblers bathing in the garden pool.

On June 23rd a trip to Chain Islands and Discovery Island was enjoyed. On Bird (or Chain) Island Glaucous-winged Gulls and their eggs were plentiful, one nestling was seen emerging from the shell. Eggs of Baird's Cormorant were found. Red-winged Blackbirds were nesting there. No Crows were seen. By invitation of Capt. Beaumont the group visited Discovery Island, saw a large disused Bald Eagle's nest. A small Heronry is almost certainly there, two birds and one nest being seen. On the trip eleven species were noted including Gulls, Cormorants, Pigeon Guillemots, Nuttall's Sparrows, Barn and Violet-green Swallows, Purple Finches, Goldfinches, Blackbirds and Lutescent Warblers. It may be noted that on a visit to the islands a week previously 25 species were seen.

J. O. Clay.

Bird Notes from the Museum:

Hummingbirds. Orphaned hummingbirds but recently hatched were discovered by Mrs. M.S. Campbell of "Spencerwood" near Ardmore. Mrs. Campbell attempted to rear the nestlings by feeding them minute quantities of a mixture of mashed caterpillar "insides" and syrup by means of an eyedropper. The young birds, which were no bigger than bumble-bees at the start, grew and thrived for several days but despite her best efforts they weakened and died on the seventh day. To keep young hummers alive for a week is an accomplishment in itself since the food of these birds is so specialized; to rear them to the free-flying stage is almost too much to hope. We are interested to learn if anyone has succeeded in rearing hummingbirds.

For interesting and valuable literature on bird conservation we recommend writing to the Emergency Conservation Committee, 767 Lexington Ave., New York 21, N.Y.

STALACTITES

These pendant masses are found in limestone caves and at times under bridges, arches and old buildings where water is percolating through joints in the masonry. They are formed by lime bearing solutions that drip very slowly from an elevation. The word is derived from a Greek one meaning - to drip.

On exposure to the air part of the water evaporates and the solution of calcium carbonate becomes supersaturated, a deposit of this substance takes place, and as the drop continues to fall from the same spot a small column of white calcite grows downwards in a vertical position from the roof very slowly.

In the same way stalactites of ice (icicles) are formed in frosty weather as water dripping from the branches of trees or the eaves of buildings gradually freezes.

The conditions essential to the perfect development of stalactites appear to be (1) a very slow trickle of water from a fissure; (2) regular evaporation; (3) absence of disturbance, such as currents of air. Ice stalactites form most readily on calm cold nights and stalactites of ice or calcite are seen in greatest perfection in the interior of caves. They form abundantly in limestone caves as glimmering white columns covered with a thin film of water.

Ice caves of considerable size occur in the Arctic and Antarctic regions, and are draped with ice stalactites often resembling wonderfully those of limestone caves. Where the water drops upon the floor of one of these caves evaporation still goes on, and if the air is perfectly still the drop will always land on the same spot and a pillar, called a stalagnite will rise eventually till in course of time it meets and joins with the stalactite above.

A stalactite of calcite seven feet long has from careful observations been calculated to have taken four thousand years to grow. Large stalactites may be three or four feet thick, but in that case they are usually due to coalescence of adjacent ones. Single

stalactites two feet in diameter are not rare. From data obtained by measurement of the rate of growth at the present day it has been estimated that as much as two hundred thousand years may have elapsed since certain stalactites had their beginning.

The stalagmitic crusts on the floors of limestone caves are usually mixed with blocks which have fallen from the roofs and with sand and gravel carried in by floods. The bones of animals are often mixed with this debris if the cave had accessible entrance.

Stalactites have been found also in the interior of lava caves where the upper surface of the lava has cooled to form a crust, while the interior was still fluid. It sometimes happens that the liquid lava makes its escape leaving great cavities below the hollow roof of the lava. The interior of these caves is covered with a black shining film of glassy basalt, and black stalactites of lava hang downwards. Their surface is sometimes changed to brown or red by the action of acid vapors which fill the cave after the lava flowed out. these stalactites are tubular, with bluntly rounded ends.

Besides calcium carbonate there are other minerals that form stalactitic growths, such as limonite (a hyrous iron oxide), opal and chalcedony (varieties of silica) and gibbsite (a hyrous oxide of alumina). Stalactites formed by these minerals are generally small, and are usually found in mines, in the cavities of mineral veins.

George Winkler.

Bird Notes from the Museum:

Horned Owls. Mr. J.A. Flett of Maple Bay, near Duncan, sent in a Horned owl which was shot on August 25th near his chicken runs. The bird, a young female of the year, contained remains of a chicken and wheat grains (from the chicken's crop?) conclusive proof that it was up to no good in the vicinity of the hen roost. A second owl captured alive at the same time subsequently escaped.

SOME RARELY SEEN MARINE FISHES

The waters about our coast abound in many species of fish, some common and consequently well known, some seldom seen and therefore not well known. Among the latter group are several fishes which make their home in more southern waters but which are occasionally found off the coast of Vancouver Island. One of these is the barracuda, a food fish common off California and southward and noted for its savage disposition. Armed with an array of sharp teeth on long jaws it is a formidable predator of small fishes and is said to even attack man. Fortunately, it is apparently a rare visitor to our coast, only one or two being taken each season in the fish traps at Sooke. Moreover, those found in Canadian waters are usually of small size, seldom exceeding 30 inches in length.

Another rarely seen fish is the bonito which is also apparently southern in origin. Only two specimens are known to have been taken in British Columbia waters the first at Rivers Inlet in September, 1900, and the second at Otter Point, Sooke, at an unknown date. Both are in the collection of the Provincial Museum.

A fish of striking appearance is the handsaw fish which is characterized by a long slender body with a long back fin resembling the teeth of a saw in outline. Another unusual feature of this fish is the possession of sharp knife-like teeth projecting down from the roof of the mouth. Since the jaws are well provided with sharp teeth in the usual position the fang-like teeth seem to be superfluous but may perform some special, and as yet unknown, function. Several specimens have been taken in recent years, one in 30 fathoms on a salmon troll of Kains Island, Quatsino Sound in July, 1937, one in a fish trap at Otter Point on July 5, 1944, by two Indians, Dick Harry and Ed George. The average length appears to be about four and one-half feet.

An apparently rare fish, and one in which we should take a special interest is the prow fish, Zaprora selenus. Only two specimens have been taken, one near Nanaimo in November, 1895, and one near Victoria in 1897. The former is the type specimen upon which the description of the species is based; both are in the Museum collection. The series of "port-holes" (phosphorescent organs) around the head give the fish its common name.

The barracuda and bonito together with other fishes such as the scad, the ocean sunfish and the moonfish are more common in the south. Apparently a few individuals wander northward each season and drift into Canadian latitudes being carried by ocean current which bear in a north-westerly direction off our coast. These fishes should therefore be looked upon as casual visitors to our coast and perhaps should not be regarded as permanent residents.

On the other hand fishes such as the handsaw fish, the prow fish and others such as the king-of-the-salmon and electric ray are probably present all year round. The reason why they are seldom seen is probably not so much that they are few in number but rather that they are rarely caught by ordinary fishing methods. Careful investigation would probably reveal that each species exists in considerable numbers but are seldom taken by standard fishing gear.

As other fishing methods are developed and as other areas are explored we may expect to learn more about these rarely seen species and perhaps also gather records of species hitherto unrecorded in British Columbia waters.

G. Clifford Carl,
Provincial Museum.

A TRIP TO BARE ISLAND:

On May 27th 1945 through the courtesy of Mr. and Mrs. C. Patey it was possible to make this trip to Bare Island in their launch. The party consisted of Mr. J. O. Clay, Mr. E. F. G. White, the writer and F/O J. L. Davis of the R.A.F., our genial hosts and their two children. F/O Davis is a very keen bird observer from Carmarthen, South Wales, and had made a special trip to this coast for the purpose of studying our birds and their habits with comparisons to the birds of the coast of South Wales which has some very prolific breeding areas. As he had to return east immediately it was necessary to take this trip at this time which was about three weeks too early for the height of the nesting season, few if any of the Gulls' nests had the complete clutch of three eggs and the cormorants were mostly building.

It was a perfect day for observation, hot and sunny, clear, no wind and exceptionally calm. Leaving Shoal Harbour we took a direct course for the Island. On the way a few male Harlequins and female Bluebills were noted, six Pacific Loons and about the same number of Western Grebes, three male White-winged Scoters were seen at very close range. Both cormorants, marbled murrelets and pigeon guillemots were seen in number all over the water and glaucouswings were everywhere.

On nearing the island the first thing that was noted were Herons flying near the few trees at the east end. On closer inspection it was found that there were seven nests there; two in an arbutus, four in one fir and one in another. I went up to the single nest only to find two broken shells; evidently the work of crows which were flying round in numbers.

Both the White-crested and Violet-green cormorants were nesting on the rock ledges, the whitecrested taking the higher ledges of the south cliff where twenty-three nests were counted but only three separate eggs were seen at the first approach. I went back to get my

camera and on my return crows had already accounted for two of the eggs and from evidence of shells around the other nests they must have broken and spoiled a very large number of eggs.

The greatest disappointment of the trip was the absence of Puffins. The colony in the past has been well known and contained quite a large number. This year I understand none of the birds have been seen in this locality. Whether they have moved to some adjacent island or forsaken the straits altogether is something we would very much like to know. As late as four years ago it was a common sight to see them there and south of Chain Islands. If they have been depleted through the activity of predators it would be well worth investigating as they are without doubt one of the most interesting birds that we have had on our shores.

The growth of grass and brush is very dense on the higher level of the island and here were a number of Red-wings and song sparrows which were probably nesting. A pair of Black oystercatchers had a nest with two eggs on the west shore about twenty feet above high water and another pair were seen at the other end of the island.

On the return trip a stop was made at Yellow Island. Here there were a large number of Glaucous-wings nesting, also some violet-green Cormorants, and two Oystercatchers were flying round and settling on the rocks, but we did not see their nest. Most of the small islands all through that part seem to have nesting Glaucous-wings but the really big colony is on Bare Island.

A. L. Meugens.

A Flight of Termites:

Two species of termite or white ant are known to British Columbia. The larger and more common one is Zootermopsis angusticollis Hagen; the smaller and less common species is Reticulitermes hesperus Banks.

The former is the one most generally seen in

rotting logs when the bark is removed or the log is split. It is also the species the queens of which are commonly seen flying at sundown during August and September. The latter species is more subterranean in habit preferring dead wood in the form of roots of old stumps or partly buried logs; colonies are sometimes also found under rocks and boulders. Both species are of some economic importance because of their wood-eating habits but fortunately they seldom cause serious damage in the Province.

The purpose of this note is to record a few observations made on the emergence and flight of queens of a colony of subterranean termites, a species rarely seen on Vancouver Island. This flight was noted at Mill Bay on August 26, 1945, on the top of a twenty-foot bank overlooking the beach. Here in a cleared area in front of tourist cabins large numbers of flying queens became conspicuous at about 11 a.m. They were traced to a point of origin near an old rotted stump (possibly a Douglas fir) where at least three exit holes were located in the ground. Near one hole a portion of an earthen tunnel was visible apparently having been constructed at some previous time by worker termites. From the tunnel and from the other two holes winged females were emerging in large numbers; most of them immediately climbed up grass and weed stems in the vicinity of the exit holes and took off in their characteristic fluttering flight. Wasps in the vicinity were preying upon them as they emerged and no doubt consumed considerable numbers.

The flight lasted for well over one hour but the greater number took to the air during a period of 15 or 20 minutes; hundreds were visible in the air at one time and were noticed by campers in the vicinity.

The weather was cool with an overcast sky; rain had fallen the previous day but general conditions were dry.

G. Clifford Carl,
Provincial Museum.

NOTICE OF MEETINGSMONTHLY MEETING

Tuesday
Nov.13th Provincial Library Reading Room.
Speaker: Mr. J. C. Macqueen.
"Weather and Forests".

GROUP MEETINGS

Tuesday
Nov.6th Botany. Archdeacon Connell
"Wildflowers from Saanich to Sooke"
Royal Bank Building cor.Cook & Fort Sts.

Tuesday
Nov.20th Geology Mr. W.H. Mathews
Mineral Museum, Superior Street.

Tuesday
Nov.27th Ornithology Miss Anna Ewert
"Birds of British Columbia".
Royal Bank Building, cor.Cook & Fort Sts.

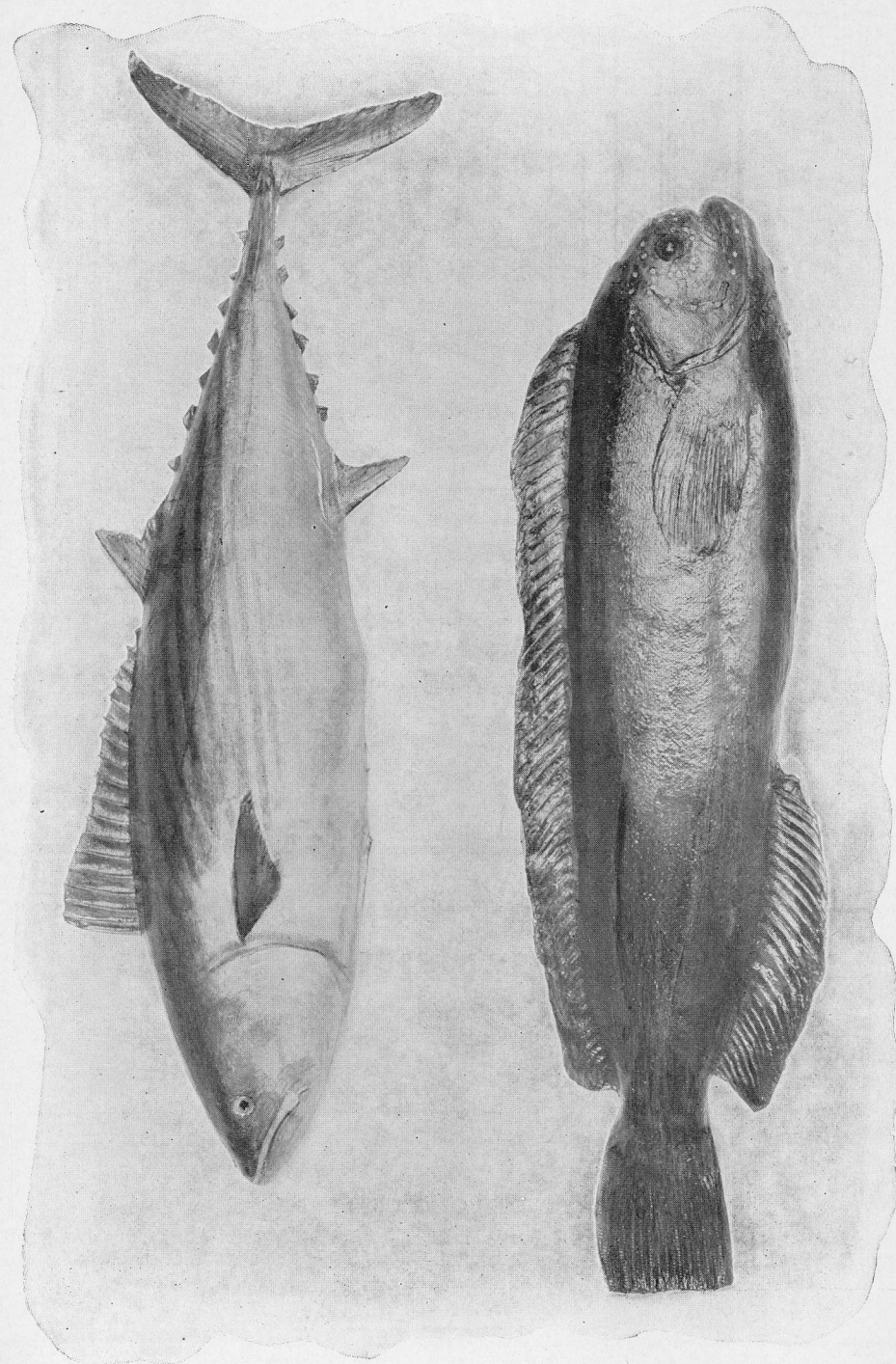
Tuesday
Dec.4th Marine Biology Mr. L. Colin Curtis
Royal Bank Building cor.Cook & Fort Sts.

ALL ABOVE MEETINGS AT 8 p.m. SHARP

Note: The meeting room at the Royal Bank Building is
over the Bank and the entrance is at the side
on Cook Street.

SPECIAL JUNIOR MEETING

Saturday At 10 a.m. in the Provincial Museum.
Nov.10th Dr. Clifford Carl.
As this is the first meeting of the Junior
members it is requested that they all attend
so that future activities can be arranged.

(Bottom) PROWFISH (*Zaprora silenus*)(Top) BONITO (*Sarda lineolata*)

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Annual Subscription: Single, \$2.00; Family, \$3.00; Junior, \$1.00.

NOTICE OF NEXT MEETING

The next meeting of the Society will be held in
PROVINCIAL LIBRARY, PARLIAMENT BUILDINGS
at 8 p.m. on Tuesday, the 13th November, 1945