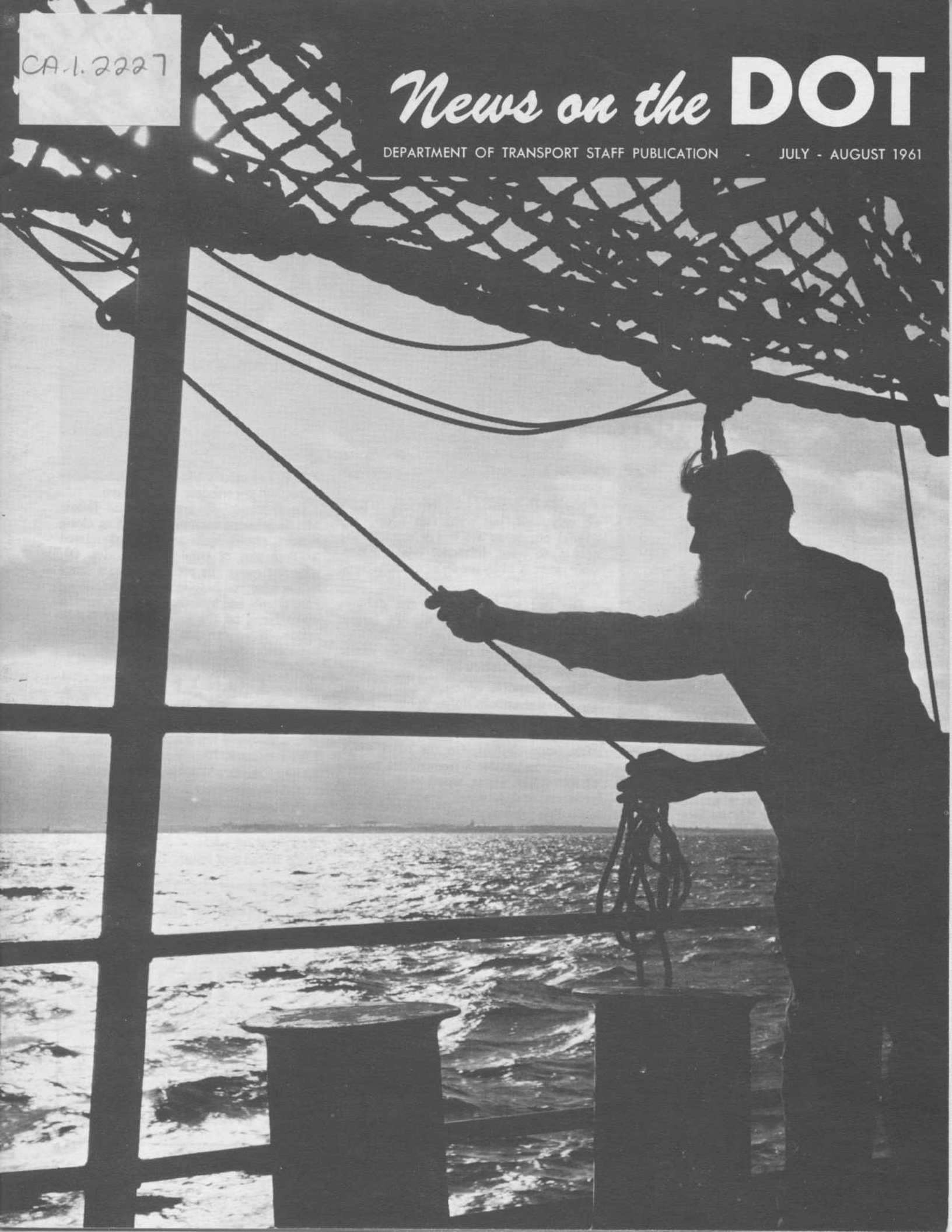


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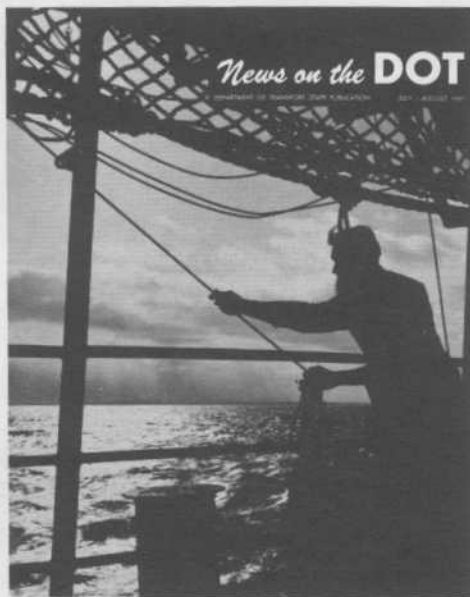
News on the DOT

DEPARTMENT OF TRANSPORT STAFF PUBLICATION

JULY - AUGUST 1961



EDITOR'S PAGE



OUR COVER

A salty crew member of the CMS *Labrador* goes deckside to enjoy a pipe and solitude. The life nets of the helicopter flight deck overhead made a pleasing backdrop for the photographer, when he took this picture in the twilight hours after the *Labrador* had had a busy day off the north coast of Cape Breton. (See "Sailing Canada's Waterways", page 8).

WE GET QUESTIONS

Since the May-June issue "hit the stands" several interested readers have queried us about its cover picture of the *JetStar*.

A photograph of an oil painting that hangs in the office of Flight Superintendent J. D. Hunter, it showed what the *JetStar* will look like, complete with D.O.T. markings, when it goes into service in September. The artist is an employee of Lockheed, the manufacturers of the aircraft.

DON'T SELL CANADA — BUY CANADIAN

In a crowded hardware store the other day a man we know made a purchase. As the clerk was wrapping it up he asked if it was a Canadian-made product. He explained that he wanted to boost employment by buying Canadian.

Almost every person in that store stopped and turned around. Silence rang out. It was as though they were hearing about "Buy Canadian" for the first time.

If it was the first time—good. Let's hope that there will be a second, a third, a fourth.

The "Buy Canadian" way of life makes good sense, not only for the larger companies which are the country's major purchasers, but for every home in this land. For in the final analysis, whether the national economy—and you as a Canadian citizen—is going to advance or stagnate largely depends on the purchasing decisions of each and every individual consumer.

No doubt, you say to yourself, "That's all very well, but what can I do? My annual purchases are but a drop in the bucket, so what difference could it possibly make if I buy products manufactured elsewhere?"

The fact is, Canada has the dubious distinction of being the world's largest buyer of foreign-made, fully-manufactured goods (nearly five times the per capita average of the United States).

These imports seriously outrank our exports, not only in dollar volume, but in job volume as well. Our imports are either fully-made goods or components with a high labor content. On the other hand, our exports include a tremendous volume of things like wheat, wood pulp, forestry products and minerals where the labor content is relatively small.

Cold, hard figures best tell the shocking tale. Manufacturing employment for 1959 was 1,300,039—a decline of 53,000 from 1956 although in the same period our population increased by one and a half million. This decline in employment can be attributed in great measure to the rising volume of foreign-made articles being sold in Canada.

So every dollar spent on Canadian-made finished goods, instead of foreign-made counterparts, has much greater significance than it seems on the surface.

Public apathy must be overcome—too many of us cast disparaging thoughts toward the idea without realizing that by practicing "Buy Canadian" we help to make work and reduce costly unemployment. As well, we help to carry the burden of taxes, education, highways and hospitals.



Steinhaur by Steinhaur

NEWS ON THE DOT CONTRIBUTOR

The sketches which illustrate the article "Weather and Why" on pages 11 to 13 are the handiwork of Norman Steinhaur, a technical illustrator with the met. branch. A D.O.T. employee since 1949, he has been a frequent contributor to our pages.

Other employees are invited to follow Mr. Steinhaur's example by sending along articles, photographs and artwork related to Transport or employee activities. Or, why not query the editor? Write a letter telling what you have in mind or describing your talents and how they might be used to make News on the DOT a better publication—if we can use your material, we most assuredly will.

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News on the DOT

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July-August 1961



FROM THE DEPUTY MINISTER'S DESK

I HAVE found, in the course of my visits to departmental establishments outside Ottawa, that our field staff is interested in new developments at headquarters and in the work of other branches of the department.

It is useful for all of us to know as much as possible about the activities and objectives of the department as a whole. Let me tell you about two things which have attracted my continuing interest.

The first relates to marine activities. For a long time there have been suggestions from the public about the need for a coast guard service in Canada. On careful analysis, these suggestions were often found to relate to marine search and rescue services in the event of an accident or an emergency. Our vessels have long been carrying out many of the other types of activities normally performed by a coast guard anyway, such as buoy laying, lighthouse supply and icebreaking.

About a year ago it was decided that to help marine search and rescue activity the department would provide three marine specialists to work with RCAF Search and Rescue Centres. These three officers have already been selected and are hard at work—one in the Maritimes, one in the Great Lakes area, and one on the West Coast.

The department started construction this spring on a new type of special vessel designed to assist in this field. This will be a fast coastal patrol cutter assigned to provide help in the case of an emergency, to assist in marine search and rescue, and to perform any directly related patrol and regulatory duties. These vessels will be similar to the well-known and successful U.S. coast guard 95-foot cutters. Two will be based in Atlantic waters and two off the coast of British Columbia. In the Great Lakes, because of the very high density of pleasure boat activity and the wide areas to be covered, we plan to have one of these cutters operating along with three smaller, very fast launch-cruiser type vessels.

These vessels will become the newest wing of our large and efficient Canadian Marine Service; the departmental fleet which

penetrates all Canadian waters, including the remotest areas of the Arctic, and of which we are so proud.

Another project of great interest is the use of satellites for civil purposes. It appears that the first important such use of satellites will be for providing communications over long distances and for providing information of assistance in the field of meteorology.

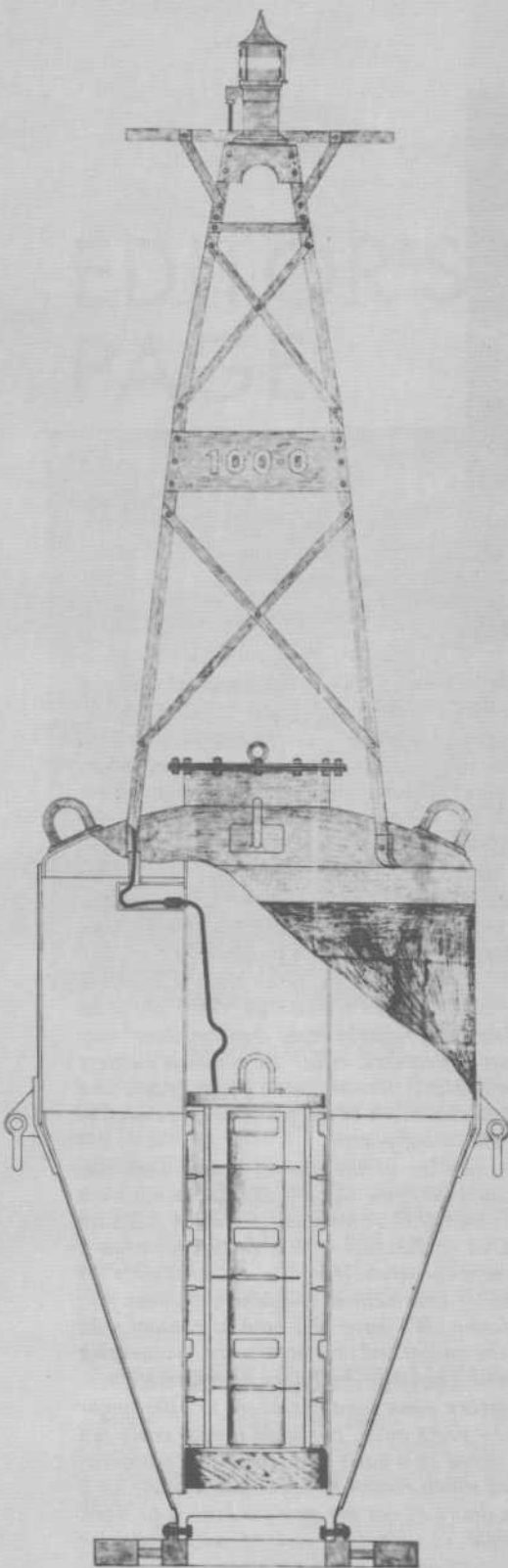
A great deal of basic research relating to satellite communications is being carried on in the United States and the United Kingdom; and in the field of meteorology, in the United States. Our meteorological branch is keeping in close touch with U.S. authorities who are carrying on the research program.

The actual improvement of communications from ground to satellite and from satellite to ground is essential. Once the communication facility exists on a reliable basis then satellites may be used for normal communications, either as common carriers for services open to the public (telephone, etc.) or for specialized purposes. It is in this field that much of the interesting research in the civil use of satellites is taking place.

Canada, as a senior member of the globe-girdling Commonwealth Telecommunications System, has already had discussions with the U.K. It is likely that D.O.T. technical personnel will have an opportunity to work in conjunction with a British team on a research and development program for the establishment of regular communications by this method somewhere between five to fifteen years in the future. We have also been in contact with the U.S. authorities on the subject and they in turn are co-operating with U.K. authorities with regard to exchange of information.

The point in world history when satellites begin to offer major civil benefits is still a few years away, but when it does come full benefits can only be achieved on a basis of international co-operation since this is an area which cannot be approached solely on a national basis. It is the desire of our air services branch to work towards this international co-operation and to participate on whatever scale our resources permit in the research and development work which is now going on.

J. R. Baldwin



bright buoys of the seaway

by Reg Fife*

THE wind whistled through the rigging that cold fall night; the lake water was more than nasty. We were in shoal water, and if not knowing exactly where you are means you are lost, we were indeed lost.

It could have been dangerous, but there was no point in panic. Ahead was a flashing red light. We drew carefully alongside, shoosed the birds off it, shone the flashlight, and read the number off the buoy.

Even before we read it, we knew that the buoy bore an even number. All red ones do. We also knew on which side of it to find safe water. And when we had the number and related it to the chart we knew exactly where we were, and so could move ahead in safety.

Buoys have been used as markers for channels, reefs and wrecks since the middle of the last century. They are to the sailor much the same as the car driver's signposts.

You can't trace the use of buoys back beyond 300 years ago when they were used on the Thames River in England. But warning lights were most certainly used by sailors long before that. In 1565 Elizabeth of England granted to the Corporation of Trinity House the right to maintain beacons for guiding ships through dangerous pas-

sages. In that country Trinity House still controls the beacons and buoys.

Men of the sea are by their calling an international lot, and in 1889 sailors from around the world convened in Washington to agree on a uniform system of buoys and on the meaning of navigation lights.

Throughout most of the world you can sail with confidence knowing that a red buoy or red light should be kept on your right hand when returning from the sea or when running upstream in a river. New sailors are taught to remember the slogan "Red Right Returning."

Canada uses this "lateral" system of buoys. However, Norway, Sweden, Germany, Italy, Turkey and most other countries use a "compass" or "cardinal" system which, by use of various combinations of shape, color, and topmark, gives the sailor a compass bearing on the direction of danger from the buoy. The last three of those countries use the "lateral" system as well.

Where did the word "buoy" come from? Our best guess is from the Latin word *boia* meaning fetter. Ships were "fettered" to their mooring buoys.

buoys at a St. Lawrence
Seaway lock get their
annual refinish job



England had the first lighted buoy, with gas as the illuminant, in 1878. Ten years later electricity was used in buoys off New York. Now many Canadian buoys laid by the Department of Transport are lit by electric batteries. They have steadily replaced the acetylene-gas lit buoys in rivers and sheltering waters, which have been used for 50 years. But the acetylene buoys are still best for exposed places on the sea coasts and open lakes and there is no move in Canada to replace them with electric buoys.

Almost all the lighted aids to navigation are automatic: switches flip lights on when darkness approaches. And they even have automatic lamp changers in case the bulb burns out.

One of Canada's claims to fame in international navigation is the invention of the diaphone. This horn device gives off a sound blast in a certain sequence. The lost sailor can, by listening to the order and lengths of the blasts and comparing them with his chart, tell approximately where he is. Some of these devices have a range of 10 miles.

Each spring, Department of Transport "buoy tenders" set out the markers along

Canada's inland waterways. Captain A. D. G. Deforge, with 49 years of tending buoys on the Ottawa, Richelieu and parts of the St. Lawrence, says one of the toughest problems he faces is placing them in their exact positions—the ones shown on sailors' charts. To do the job he commands the busy tender CMS *Verendrye*—a modern 200-tonner.

One of the purposes of buoys is to mark dangerous water at the edges of channels. Into these waters the captain must manoeuvre his ship and, at the exact points shown on the chart, place the buoys in position. Even in flat calm water, with no current, this can be a tricky operation. But when winds and currents are high, it takes a good sailor to handle the whole operation—dropping in buoy, chain and anchor without undue risk to crew or ship.

For example, on the 78 miles along the Richelieu River from Sorel, Quebec, to the United States border there are 270 buoys, plus many shore-based range beacons. In all Canada there are more than 6,000 public navigation buoys requiring annual maintenance, in addition to the innumerable ones set out by private yacht and boating clubs.

Because navigation is kept open until late in the season—much of the work in the late fall is done in snowstorms and ice conditions—it is impossible to lift every buoy out of the water. Most spar or wooden buoys stay in the water and suffer the rigors of freeze-up, and the even rougher experience of the spring break-up.

The different conditions—whether a buoy is in fresh or salt water, made of wood or metal, and how long it will be in the water—govern the system of protective finishes that it should receive.

Gas and electric buoys are taken ashore for winter maintenance and finishing. Spar buoys often get their paint job right on the deck of the tender.

In recent years a reflecting tape similar to that seen on car bumpers has been added to most unlit buoys, making them easier to pick out at night with a flashlight.

To the sailor, the color of the buoy and the color and character of its light tell him where he is, and which way he should set his course. Without them, he would be lost. With them, the flow of shipping along our inland and coastal waterways can continue with safety and despatch.

* Mr Fife, a freelance author, wrote this article for the C.I.L. OVAL. It is reprinted here with their permission.

Lights To Land By

IF you have flown in a commercial aircraft at night then you know the incomparable thrill of first seeing that black void when the left wing drops and the plane banks down for a landing. For, almost immediately, piercing through the inky night, you see thousands of lights etching the airport's runway—a fairyland of sparkle and glitter, yet glowing, warm and safe.

And these lights "talk". Not saying nice little fairytale things like "twinkle, twinkle", but "telling" the pilot how to get a million dollars worth of aircraft and a priceless human cargo safely back to earth.

Contrast today's clock-like efficiency of radar ground controlled approaches and high intensity lighting systems with the ways of old—now preserved in Hollywood films, 1930 vintage. You remember: the lone pilot, a rain-lashed cockpit windshield and a few friends on the ground below scurrying about to line a grass field with gas lanterns. If it was a spectacular, Hollywood lined the edges of the runway with gasoline and the hero landed, three point safe through a gauntlet of billowing smoke equal to a six alarm fire. It was worthy of Clark Gable and his talents.

But such a system today would hardly meet the needs of high speed jetliners, which require precise instructions and visual aids to manoeuvre their unwieldy bulks onto the tarmac.

Air transport is now so vital it must operate in almost all weather and at any hour. Scheduling is tight; changes are made for only the most serious of reasons.

A flight may take off from London in perfect weather and expect to arrive at a Montreal basking in the same climatic good fortune. But the weatherman predicts the weather; he doesn't make it. And Mother Nature is a good short order cook who can whip up quite a blustering batter on short notice.

For these reasons landing and lighting go hand in hand: lighting must be such that it can be depended upon to guide an aircraft safely in during darkness or under poor visibility conditions.

Canada's airport lighting facilities are equal to—and in some cases more advanced than—other countries. But since so many aircraft operate across foreign boundaries, variations in lighting patterns and colors are kept to a minimum. International standardization is controlled by

the International Civil Aviation Organization (ICAO) from its Montreal headquarters.

In the early days of flying—back in the 20's—only daytime flights were made, so there was no need for lighting. In fact, until the 1930's airports in Canada (except Calgary, Vancouver and Toronto Island) were grass fields, unattended and unlit except for perhaps a flood light or two for emergencies.

But with the inauguration of the air-mail service between Winnipeg and Calgary in 1929, lighting became a necessity.

The airmail route resembled a skyline pony express. Floodlit airports were established at Winnipeg, Regina and Calgary, with intermediate aerodromes located at 30-mile intervals. These smaller fields were marked at the corners with multiple-type boundary lights and all fields were equipped with standard 24-inch electric, rotating beacons, visible for 100 miles in clear weather. In addition, acetylene gas beacons mounted on 21-inch towers were placed at 10-mile intervals between the fields so a pilot was never more than a hop and a skip away from the next beacon, field or airport.

The airmail service was discontinued in 1932 and the lighting equipment dismantled and stored for future use.

As the size and landing speed of aircraft increased, it was necessary to provide paved runways with smooth level surfaces and sufficient load-bearing capacity. This is exactly what happened in 1938 when the then-new government airline, TCA, acquired Lockheed 14's and began regular operation.

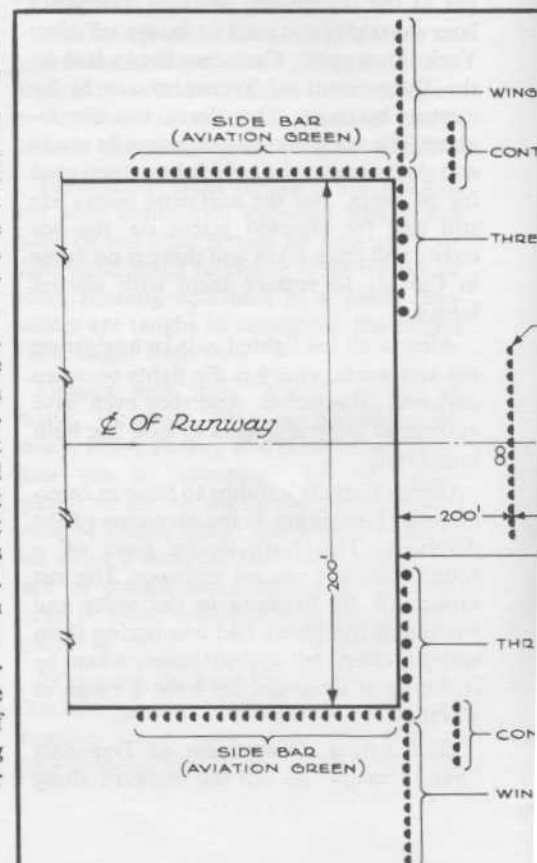
Approach lights to assist the pilot in aligning his craft with the runway were installed. Since the pilot's seat was on the left side these early installations consisted of a row of lights extending out 3,000 feet from the end of the runway and parallel to the lefthand side. However, it was soon found that it was too difficult to align a plane with a single row of lights off to one side, so the system was abandoned. Today the centre line system—lights down the middle—replaces it.

As demands on airport lighting continued to increase in proportion to the increase in air travel, the Department of Transport concentrated on developing higher intensities to approach all-weather

operations. In 1952 such high intensity installations were put in at Montreal, Regina and Gander and the next year at Vancouver. Now they are used across the country at all major D.O.T. airports. A typical modern airport has at least one bad weather runway with radio and lighting facilities capable of guiding a plane in under minimum conditions of a 200-foot ceiling and a half mile visibility.

Since the pilot gains his sense of forward speed from the flow of lights on the approach and runway, regular spacing is an important factor. High intensity approach lights are aimed so that the main beam of each interrupts the aircraft's glidepath 1,500 feet in advance of the installation. In bad weather, for which it was designed, this allows the pilot maximum vision of the approach pattern within a limited visual range.

One thousand feet from the end of the runway there is a transverse bar of lights that acts as a visual horizon and distance marker. This bar is becoming known as the "decision bar", because when the pilot sees it he must decide whether or not he is properly aligned for a safe landing. Once



by Norman Hall, Lighting Engineer
Electrical Engineering

passed, he must land—he cannot take the aircraft around for another try.

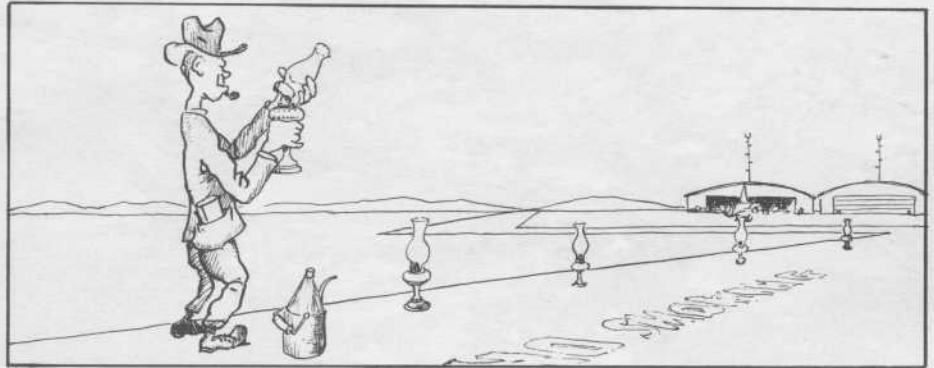
The beginning of the runway is marked by an L-shaped concentration of green lights. Two bars of red lights indicate that the threshold is just ahead and they contrast with the green to make the threshold more discernible.

Parallel taxiways leading from the ramp area in front of the terminal building are edged with blue, medium intensity lights. And, in addition to these multicolored approach, runway and taxiway systems, red obstruction lights clearly mark structures and terminal buildings which might be hazardous to safe landing.

At Edmonton International Airport—just one of the department's modern new fields—more than 1,000 bulbs of medium and high intensities are required to light up the entire area. And, interestingly enough, with all our progress in automation and mechanization, these must still be changed by hand when they burn out.

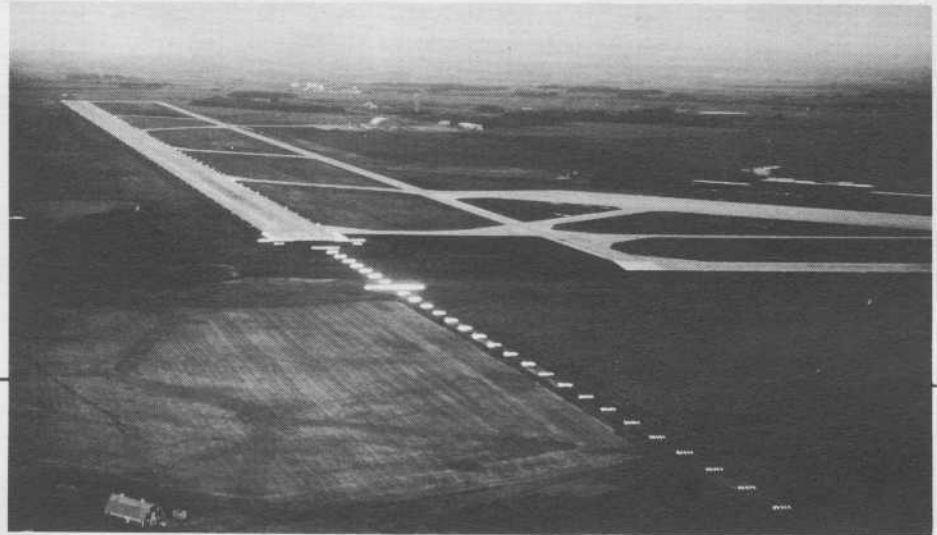
Who operates and controls these lights? A panel is located in the terminal's control tower where air traffic controllers see that the proper switches are regulated. Each

(continued on page 13)



YESTERDAY, a lone airport attendant scurried about to line the grass field with gas lanterns as a plane approached.

TODAY, airports, such as Edmonton International Airport as shown here, are brightly illuminated by high intensity lighting systems controlled from the tower.

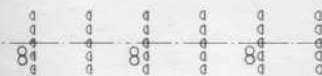


(AVIATION GREEN)

T BAR (AVIATION RED)

D BAR (AVIATION GREEN)

IMMINENCE OF THRESHOLD BAR
(AVIATION RED)



1000' DISTANCE MARKER (CLEAR UNITS)

28 HIGH INTENSITY APPROACH BARS (CLEAR) AT 100' SPACING

15 TWIN LOW INTENSITY APPROACH UNITS (AVIATION YELLOW) AT 200' SPACING

800'

3000'

WLD BAR (AVIATION GREEN)

ST BAR (AVIATION RED)

2 (AVIATION GREEN)

DEPARTMENT OF TRANSPORT
HIGH INTENSITY APPROACH LIGHTING SYSTEM
NOT TO SCALE

SAILING



Canada's Waterways

by Capt. G. G. Leask,

Superintendent, Marine Operations

CANADA'S civil navy—the Canadian Marine Service of the Department of Transport—has a history as old as Canada itself. Since Confederation government ships have tended lighthouses and buoys and performed search and rescue duties—first under the Department of Marine, then the Department of Marine and Fisheries and latterly (since 1936) under the Department of Transport. For most of these years they were known as Canadian Government Ships (CGS), but in 1959 they became a separate entity within D.O.T. and are now known collectively as the Canadian Marine Service (CMS).

Although names of individual vessels and that of the fleet as a whole have changed, their job remains essentially the same. Gone are the "Lady Laurier", the "Druid", "Aberdeen" and "Stanley", but carrying on the enviable tradition handed down by these hard working vessels are the "John A. Macdonald", the "Labrador", the "d'Iberville", the "Camsell" and 50 other major ships.

Entering the operations centre in the Hunter Building at Ottawa one is confronted by a huge magnetic map of Canada on one wall and facing it, a chart of multicolored squares depicting the operations of the entire fleet for 1961—January to December.

The position of each vessel on any given day is recorded on the map—from weather station "Papa", 900 miles out in the Pacific, to Eureka, the most northerly point covered by marine operations. And, in this same vital room, the constant chattering of a teletype machine keeps the centre informed of the positions and requirements of the vessels.

During winter months the hum of the facsimile equipment giving forth the latest ice information adds to the heart-beat of D.O.T.'s vast marine undertakings.

CMS vessels sail balmy west coast inlets, choppy eastern straits, calm Great Lakes (when they are) and chilling northern waters. A little imagination applied to the broad outline as projected on these walls gives an idea of the arduous tasks they perform with efficiency and tenacity.

Once briefed on the codes of that most attractive, but—to the uninitiated—bewildering wall, you can tell that from late December to May of this year nine icebreaking members of the fleet were continuously employed keeping the Montreal-Quebec channel open for ice to flow downstream and assisting merchant shipping from Cabot Strait. Seven lighter icebreakers crunched up the crippling ice of the Gulf of St. Lawrence, East Coast waters and Great Lakes during this same period, as conditions and traffic demanded.

This past winter was the worst on record for ice. From December 20 to April 10 our vessels answered some 250 requests for assistance. They logged 107,653 miles—mostly through binding ice—during this period to clear the way for ore, grain, paper and lumber products to get from our shores to foreign markets. Not until May 29 was the icebreaking finally over for the season.

The icebreakers, along with several buoy and supply vessels, spent the next two months preparing for the North—a vital seaward sweep to Canada's outposts. These operations got under way this month and will carry on through October.

In that time over 100,000 tons of cargo and fuel will be successfully manhandled over Arctic beaches where there are no piers and where weather and ice try to thwart man in his perennial struggle with nature.

Convoys escorted by icebreakers will steam through ice openings—called "leads"—found by aerial ice reconnaissance done by the meteorological branch and by the icebreakers' own helicopters. Working in the North alone, any one of these ships may steam up to 14,000 miles in a season. However, not all of these miles are to far northern stations. Icebreakers are called upon to clear the way for some 40-odd merchant ships which annually load grain at Churchill.

It is fitting that CMS ships, which depend on them for navigational assistance, should supply the more than 800 lighthouses in Canada with food, fuel and stores. As well, over 1,300 light buoys must be kept in order (many have to be lifted before winter sets in and relaid in the spring) and a very large number of lighted beacons and unlighted buoys have to be inspected and attended. The sea lanes in Canadian waters are well guarded by the Canadian Marine Service.

(continued on next page)

CMS d'Iberville plys her way through ice-bound Norwegian Bay while taking part in her annual northern icebreaking operations.



Above: The 1,600 ton icebreaker CMS John A. Macdonald is the department's largest vessel currently, but she is to be joined in the future by another yet unnamed vessel of equal tonnage and similar design.

Right: Aboard the CMS Grenville departmental employees prepare to lay buoys and navigational aids along the St. Lawrence ship channel.



SAILING CANADA'S WATERWAYS

(continued from previous page)

Unique in the service's operations is the weather ship which steams in a 110-mile circuit some 900 miles out in the Pacific at weather station "Papa". It must be continuously manned.

Operation of the fleet is in the hands of Captain E. S. Brand, director of marine operations; he, with his headquarters and field staff, keeps the vessels running to meet their assorted tasks.

Field operations are controlled through 11 marine agencies located across the country at St. John's, Nfld.; Charlottetown, P.E.I.; Dartmouth, N.S.; Saint John, N.B.; Quebec, P.Q.; Sorel, P.Q.; Prescott, Ont.; Parry Sound, Ont.; Victoria, B.C.; Prince Rupert, B.C.; and Fort Smith, N.W.T. Each agency, headed by a district marine agent, supervises the work of CMS ships normally based at it, along with those temporarily under its control. In the winter our ice information office is situated at Sydney, from where local direction is given to the icebreaker fleet.

Since the opening of the St. Lawrence Seaway a few short years ago, we are constantly stepping up our organization to cope with the increasing demands of merchant shipping. The same holds true for our northern operations. With each passing year we are called upon to do more and more.

The Canadian Marine Service is giving, on an increasing scale, assistance to hydrographic and oceanographic survey teams in

the North, the latter using the vessels as floating laboratories. The navy-owned "Porte Dauphine", operated by D.O.T., does continuous scientific work in the Great Lakes area throughout the year and, as previously mentioned, the meteorological observations from the weather ship at station "Papa" are invaluable to the inhabitants of the West Coast.

Additions to the fleet in the near future will include a heavy icebreaker similar in size to the MacDonald—a 315-foot vessel of some 6,186 gross tons; an icebreaking cable repair ship; two lighthouse supply-buoy vessels for the St. Lawrence River agencies; two weather ships to replace those now manning the Pacific weather station; a depot ship for Arctic operations, and eight patrol cutters to augment the already large number of government-owned ships now available for search and rescue work.

To guarantee a supply of trained deck and engine officers to man these vessels, discussions are now taking place to set up a system to recruit cadets and offer them a career. Such a scheme would provide young adventurous Canadians with the broad training and experience they require to pursue a life on the ocean highroads.

The ships and men in the "front line" do a first-rate job. And, being associated with a tradition of establishing Canada's past, they look forward to playing a vital part in her future.



Weather and Why

highlights from several articles written

by R. A. Hornstein,
Meteorologist, Halifax

EVEN if your favorite almanac does caution you to plant potatoes by the dark of the moon; even if your grandmother did swear that thunder turned the milk sour—when a D.O.T. met. authority like Halifax Meteorologist R. A. Hornstein explains away these beliefs in logical fashion, perhaps you will agree that such weather lore is really pretty far-fetched.

Weather lore—the curious signs, beliefs, fancies and legends which man uses to assist him in explaining and forecasting the weather—has a 2,000-year history. The origins of much of it have been lost in the dim mists of antiquity, but over the centuries thousands of people have been firmly convinced that supernatural phenomena do indeed play a part in the weather. And

even today, with greater scientific knowledge of weather whys and wherefores available than ever before, many continue to hold fast to these beliefs.

Such lore adds color to our lives, but it is untrue; that is, most of it is. But the odd saying does make sense and may be highly accurate.

For example, it is true that a close connection exists between the temperature and the tempo of a cricket's chirp. Count the number of chirps in 14 seconds, add 40 and nine times out of 10 you will know the temperature to within a couple of degrees.

However, such accuracy in weather lore is rare indeed.

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WEATHER AND WHY

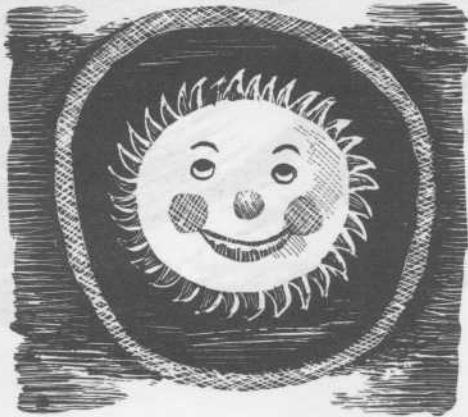
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"It's Greek to Me....."

Ancient Greeks were faithful followers of complete teachings of lore. If you happen to subscribe to the saying, "a red sky in the morning, sailors take warning", it may be of interest to know that it dates back to Theophrates, a Greek gentleman who made a hobby of studying weather.

Moving on a few centuries to the Roman era, we find they considered the Greek studies to be so excellent that very little was added, except the fact that the pig was included among those animals accredited with foresight regarding the weather.

During the medieval period in European history scientists of the day added a few items by playing with the calendar and coming up with such beliefs as, "if Candlemas Day be fair and bright, winter will have another flight. But if Candlemas Day brings clouds and rain, winter is gone and won't come again." This later evolved into our present day belief that if friend groundhog comes out of his comfortable burrow on February 2nd (Candlemas Day) and sees his shadow then we are in for another six weeks of winter. Most of us have been able to prove for ourselves without doubt that this is not so.



Old Man Moon

Getting down to cases, let's cast a thought to the moon, which is attributed with having many powers over the weather. Meteorological evidence is all against it.

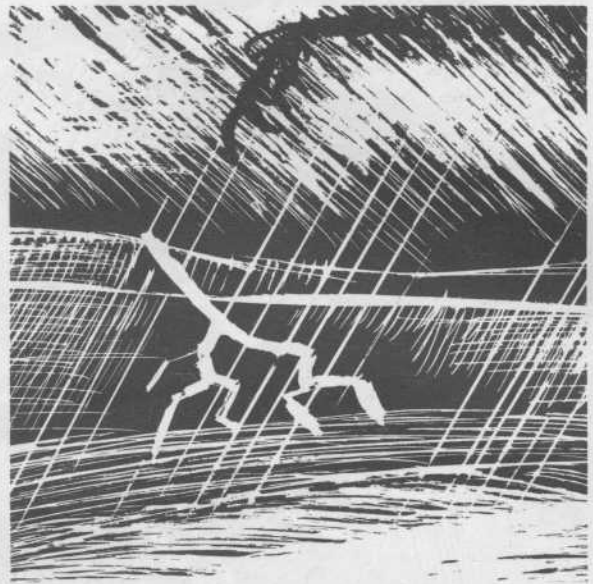
Although the moon is responsible for the earth's tides, it has been found that there's no connection between tides and weather.

People in Halifax and Vancouver enjoy the same moon, but rainfall figures for the two cities vary greatly.

"Reading" the moon differs according to the beliefs of the individual. Some follow the saying, "if the bonny moon is on its back, mend your shoes and sort your thack"—meaning it will rain. Others believe, "it is sure to be a dry moon if it lies on its back, so you can hang your hat on its horns." So one group thinks the moon on its back foretells rain, and another that it foretells dry weather. That leaves us in the position of being ready for anything, but you do not need the moon for that.

As for the advice to plant by the dark of the moon to avoid frost damage, it is poor insurance.

In one region, 31 years of records show 266 cases of frost during the bright half of the moon and 289 during the dark half. In another region, 37 years of records show 119 frosts during the bright half and 125 during the dark half. And in yet another, 36 years of records list 432 frosts during the bright half and 410 during the dark. All told, this is 817 cases of frost during the bright half of the moon and 825 during the dark half—just about as equal a distribution as one could possibly get.



Rain, Rain Go Away . . .

Many people have a fear of thunder and lightning far out of proportion to the actual danger. Lightning can smash a huge tree to bits, but more often the current only follows the grain of the wood along a narrow strip just under the bark and the damage is slight.

Lightning is not considered a major hazard and the chances of losing your life by being struck by it are 350,000 to 1.

Maybe you believe that "lightning never strikes twice in the same place". If you do, we hope you won't find out otherwise through actual experience.

The fact is that it probably *will* strike twice in the same place—the Empire State Building has been struck so often that new strikes no longer make news. During one storm the building was struck 15 times in 15 minutes.



All-Weather Dress

The popular belief that animals or birds have an amazing degree of perceptiveness when it comes to predicting the weather gives rise to a whole host of incorrect ideas.

There are those who insist that animals can foretell the severity of an entire season and grow coats accordingly. If this is true, then it is surprising to hear of deer and other wild animals that have failed to grow this extra thick coat and, as a result, have perished.

Birds are accredited with being able to anticipate storms during migration, thus being able to fly safely over distances of

thousands of miles. The facts are, though, that all too often birds are caught in severe storms and whole migrating flocks have been known to perish.

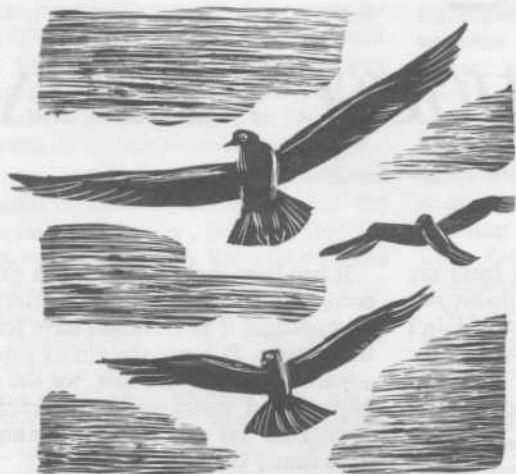
As for squirrels tucking away huge reserves of nuts in anticipation of a long hard winter, it would seem rather that their storage depends on how great the nut harvest is in a particular year.

Some folks have the idea that fish possess this weather forecasting instinct as well. While fishing enthusiasts do have a good case for the theory that fish are susceptible to atmospheric pressure changes, there is no foundation to the theory that they have the instinct to forecast these changes.

Survives the Test of Time

In some cases forecasting the weather ahead by signs does have authentic basis in fact. In the Bible we read that Christ said, when asked for a sign from heaven; "When it is evening, ye say, it will be fair weather: for the sky is red. And in the morning, it will be foul weather today: for the sky is red and lowering." Some 20 centuries later meteorologists know through studies that due to atmospheric conditions the chances are very much in favor of this happening.

Our old friend the couplet, "Red sky in the morning, sailors take warning; red sky at night, sailor's delight", is a paraphrasing of this biblical weather note.



Storm Warnings

Haloes around the moon or sun are said to herald a storm and this is usually so. "When the sun is in his house, it will rain soon", "the bigger the ring, the nearer the wet" are both Indian proverbs which take account of this weather phenomenon.

A halo is caused by the refraction of light through high ice crystals in clouds which usually are the forerunners of a major storm. So when you see such a halo it is of considerable value in knowing what weather lies ahead.

Do-It-Yourself Weather-Scientifically

With rhymes couplets and ditties destroyed by "ruthless" weathermen, perhaps you are wondering if there are any reliable weather signs to which you can subscribe when planning ahead for picnics or holiday outings. Well, here are a few:

Look for cloudy unsettled weather when

The barometer is falling.

The temperature at night is higher than usual.

The clouds move in different directions at different levels.

High thin white clouds increase. A large ring appears around the sun or moon and stays there until the overcast clouds thicken and obscure the sun or moon.

Summer afternoon clouds darken.

Look for clearing weather when

The barometer rises.

The wind shifts into the west or northwest.

The temperature falls.

Look for higher temperatures when

The barometer falls. In summer a falling barometer may indicate cloudy weather which will be cooler than clear weather.

The wind swings away from the north or the west.

When the morning sky is clear, except when the barometer is high or is rising in wintertime, or if the wind is strong from the north or west.

Look for lower temperatures when

The wind swings from the southwest into the west, or from the west into the northwest or north.

When skies are clearing—although clearing skies in the morning will likely mean warmer weather by afternoon, particularly in the summer.

In the winter, the barometer rises.

Snowflurries occur with a west or north wind.

Pressure is low and falling rapidly, wind east or northeast and backing slowly into north. (The fall in temperature will be gradual.)

And, of course, most important, listen to the daily weather reports on radio and television or read them in the newspapers—they have been prepared by our department's experts—the weathermen.

LIGHTS TO LAND BY

(continued from page 7)

runway is controlled independently by its own selector switch offering five different stages of brightness—maximum brightness for bad visibility to minimum for good visibility. As a safety precaution only one approach system switch can be used at one time.

Although the various lighting systems described here are satisfactory for today's requirements, tomorrow must be thought of. Aircraft are constantly being improved, enlarged and speeded up—all of which affect lighting installations.

The electrical engineering section of the department, whose responsibility it is to improve airport electrical facilities, keeps abreast of world-wide conditions and revises D.O.T. equipment accordingly. At the present time it is experimenting with pancake-shaped light discs sunk into the surface of the runway, but before these will even be considered for general use many bugs must be ironed out.

But the day-to-day tasks tackled by these highly-skilled specialists offer many a challenge.

During the past few years many new facilities have been added to D.O.T. airports across the country and every one—whether it be a "daddy" one like Montreal International (Dorval) or a "baby" like Charlottetown, P.E.I., involves careful pre-planning and teamwork.

So, remember, the next time you have occasion to wing your way into an airport on a night landing, the welcome glitter of lights below is not a thing of beauty alone—like the crown jewels it so closely resembles. Instead, it is another assurance that the Department of Transport is ever aware of safety and the necessity of operating Canada's airports efficiently under all weather conditions.



Grand Passage Light and Alarm.

Lighthouse keepers are a breed apart, we think, living as they do on bleak, isolated stations, guarding shipping lanes plied by vessels from exotic ports. For they must stay and man their lights, rarely seeing those far-flung ports. But are they as lonely as we think? The wife of Wickerson Lent of Brier Island, N.S., who helps "light guard" the Bay of Fundy, in telling her story provides some of the answers.

LIGHTHOUSEKEEPING — *NOT LIGHT HOUSE KEEPING*

by Madeline Lent

As recently as nine months ago my husband was a fisherman. Now he helps tend a light on Brier Island, at the westernmost tip of Nova Scotia. Its beacon reaches out into the tide-torn waters of the Bay of Fundy.

Early last December Wickerson and I moved into the Island home at Grand Passage Light, along with the four young ones. The weather was wonderful, but sly. Little did that balmy day prepare us for what was ahead.

Our three sons, 12-year-old Chester, 10-year-old Harry and 8-year-old Brian, really took to life at the light. With hills galore to slide on, a skating rink all of their own and a 45-minute, animal-studded walk to school each morning, they were as happy as sandboys. Haversacks loaded with lunch, they set off each morning along a trail rich with nature's wonders. Everything about the wild life fascinated them—a mink scurrying across the path, birds twittering in the branches overhead. How they ever reached their destination, I'll never know.

One day they arrived home carefully nursing a near-dead, red-tailed hawk. The poor thing had a mouth full of porcupine quills and was suffering from starvation.

It must have made its way over from the mainland since no porcupine inhabit our island. We did all we could, but it didn't get through the first night. However, the boys still have their prized hawk—a taxidermist mounted it for them.

I had my run-ins with nature early, too, but mine were not nearly so pleasant. The first week we were at the light a large—and stubborn—snowy owl blew in from the Arctic. Every time I hung out the washing, he would sit on a nearby pile of wood and hiss. One afternoon, tiring of this relatively tame sport, he flew over to the step and started to make short work of a rabbit he had caught. That finished it! Mustering all the backbone in me, I chased him away. But he did manage to get even. As a parting shot, he began chewing away on a wet mop—a D.O.T. one at that. I don't know if D.O.T. wet mops are any more indigestible than any other kind, but friend owl never came back.

By now our first Christmas at the light was almost on top of us. The kitchen oven—a real beauty—hummed with the efficiency of an incubator at a chick hatchery. Cakes, pies and puddings slid in and out with Christmas-time regularity, scarcely allowing the oven to cool.

It had been many years since a child had been at Grand Passage for Christmas and we wondered if Santa might have forgotten the address. But, no, the kindly gentleman apparently called here first, for the mound of toys and treats which confronted the youngsters on Christmas morning must have nearly emptied his pack.

Christmas, 1960, was anything but uneventful—as Wickerson will attest to. Our living room was small and already overtaxed, but since there must be a tree—a tree rose. During the day it was fine, but when the couch was pulled out for sleeping, Wickerson ended up under the tree with the lower branches reaching down to tickle his nose. That, he was soon to find out, was nothing.

A morning or two after the 25th our year-old crawler, Faye, approaching the lights, ran aground against the tree and floorward it came. Ornaments, tinsel, icicles and needles spewed over the "master" of the house as he dozed unsuspectingly. Needless to say, the tree stayed down!

Not all the icicles were on the Christmas tree. We faced our first "nor-easter"—a real doozer—soon after. Gales, sleet and snow beat against the dwelling. Even the smallest

dent in the insulating armor seemed to become a wind-spread rent. We moved the children, beds and all, into the kitchen, along with most of the articles from the pantry. Of course, we forgot the odd thing from the shelves and to get it required an excursion over the baby's crib—no small problem when Faye was asleep. Electricity failed during the height of the storm and Wickerson raced to the light to get a lamp going.

The next morning our home looked like a rhinestone igloo outside, but like a London blitz blackout within. Frozen spray covered every wall and window keeping the sunlight out, while electricity was non-existent on the inside.

However, I don't want this to seem like a North Pole saga. Our home was cosy in spite of the inconveniences of the weather and over the Christmas season, when we had expected to have a quiet time due to the storm, 17 friends came to visit from Westport—the only village on the island.

Sundays, so it seemed, were mostly stormy. We stayed at home—but eased our consciences by putting money in the mission boxes. Often I would listen to the Sunday services on the radio. One morning, as I was praying along with the congregation, I felt an icy spoonful of cold oatmeal being forced into my mouth. It was spoon-wielder Faye's way of reminding me that twelve o'clock was time to be eating, not sitting in a chair with my eyes shut!

All was not as serene as cold oatmeal and radio church. As winter wore on the storms seemed to grow; growling thunder was interrupted only by the odd accident like a gurgling sound from the bathroom, for instance. A dash upstairs found the toilet seat floating on the floor and the flush erupting like "old faithful".

Below zero temperatures froze pipes, burst the hot water tank and left us without water, while the waves in the Bay were practically falling over themselves to crash

in on the rocks. All we could think of was "water, water everywhere, but not a drop to drink". A tankful of water kept in the kitchen rescued us from this "Atlantic Sahara".

I must admit nerves were frayed at times—especially when the weather kept the boys home from school. I found some solace in reading, "How To Live 365 Days"—thankful that all 365 wouldn't be like these few and that spring lay just around the corner.

It was about this time we received word that a temporary keeper would no longer be needed at Grand Passage, since the light was being changed to an automatic one. We would have to go home—back to Westport. How could we break the news to the boys? We stressed all the advantages of returning to "civilization"; no more cold lunches, sleep later in the mornings, shorter walks to school.

As the hour for us to go came near, I thought the boys were sold. But just about that time a call came for an assistant keeper at Brier Island Light, five miles away, and the joyful whoops from the boys told me that I failed to convince them.

Going to Brier Island Light meant trading electricity for a telephone; the home we were leaving had electricity, but no phone; the new one, a phone but no electricity. It took just a little adjusting; washing by hand and heating irons on the fire, for example. But there are more subtle things to living without electricity—a quiet house with no radio or T.V. Reading is coming back into style in the Lent family and I think everyone is benefiting.

We have benefited in many other ways. Wickerson likes his job and hopes it will be made permanent. You see, he lost one leg in a boyhood hunting accident and although he has lived a normal life, walking miles a day with his artificial leg, he finds lighthousekeeping more suitable than being

a fisherman. As well, this work enables him to pursue his keen interest in birds.

He assists ornithologists in banding birds every fall and has a special licence to collect rare specimens for the Museum of Science in Halifax. He provided valuable bird data for a book written by Nova Scotian R. Tufts, which is soon to be published.

Our "new" home, a 1900 model, until recently was the keeper's house. With the building of a modern duplex at this station, the keeper and first assistant and their families moved into it, and our dwelling became the "official residence" of the second assistant. The contrast between the two places shows the great improvements which are under way in D.O.T. accommodation. As in any 60-year-old house, the plaster sometimes springs leaks in the most interesting places, the toilet facilities are of the healthy variety—lots of good, fresh air—and the odd cupboard is minus a door. But life is still mighty cheerful and, if we stay on in the service, we probably will get a new home sometime.

Although I only get to the village once every week or so, staying home gives me extra time for sewing and knitting—two things which I enjoy very much. The daily happenings are sufficient to keep us all interested. A Decca station to assist in charting the Bay of Fundy is within sight of us, and the CMS *Baffin* works near by. As well, when the department helicopter brings our supplies we get a thrill watching it land a short distance from the house. And, of course, living within a few yards of a fog alarm with a 20-mile sound radius has its "interesting" aspects—it blows, night and day, one long blast, one short, pauses and then another long and short blast followed by a minute and a half of silence.

In spite of all this, people often say to me, "How dull it must be away off at the lighthouse."



The boys help Faye cut (?) her first birthday cake at Grand Passage Light.



Spray following a 75 mph gale at Brier Island Light in May of this year.



Snowy owl "collected" by Mr. Lent is now in the Nova Scotia Museum of Science, Halifax.

DOT'S INTERESTING!



A DOUBLY HAPPY DAY FOR D.O.T. MISS

Lorraine Poirier, a typist in the purchasing division at headquarters, was crowned transport queen on her 19th birthday, April 13—a Thursday, not a Friday.

Chosen from among seven lovely young ladies, Miss Poirier's crowning highlighted the headquarters' annual spring dance. Judges were Brig. C. S. Booth, senior assistant deputy minister; Dr. T. G. How, deputy director, air; and Miss D. R. MacCallum, chief personnel officer, administration and canals.

In the photo the queen is seen with her two charming princesses. Left to right: Miss Collen McSorely, personnel; Miss Poirier, and Miss Denise Brule, real estate.

NEW "MEMBER" TO JOIN AIR FLEET

D.O.T.'s fleet of 17 helicopters will be bristling with envy come late August.

Latest acquisition and unchallenged leader of the fleet will be a new 400-mile range amphibious helicopter, which will hop over Douglas firs and along Canada's West Coast.

The Sikorsky S-62 will have a two-man crew and carry a payload of 1,800 pounds, mainly light package freight to supply lighthouses. Fitted with a special long range fuel tank, it will be used extensively to assist the rescue co-ordination centre at Vancouver in search and rescue operations. Responsibility for its operations will be in the hands of the district marine agents at Prince Rupert and Victoria.

FROM THE BOOK SHELF

Are you making use of D.O.T.'s fine library facilities? If not, perhaps it is because you aren't aware of the many interesting books and pamphlets available.

By contacting the librarians any D.O.T. employee can borrow a book from the shelves of our two headquarters libraries, the main library in the Hunter Building and the air services branch in No. 3 Temporary Building.

Broken down into such subject groupings as general, administrative and personnel, annual reports, economics and finance, engineering, marine, railroads, civil aviation, telecommunications, construction and several others, the material available covers a wide range of interesting subjects. And they are yours for the asking—that is, on loan.

Every two months a list of new acquisitions is circulated. Several listings on the latest one attracted our attention.

1. *The Globe World Directory for Land, Sea and Air Traffic*
2. *Etiquette*: The blue book of social usage by Emily Post

3. *The Laws of England*: A complete statement of the whole law of England by H.S.G. Halsbury
4. *Canadian National Railways: 60 years of trial and error* by G. R. Stevens
5. *Symbolic Logic and Intelligent Machines* by Edmund Berkeley
6. *Spitfire*: The story of a famous fighter by Bruce Robertson
7. *Bird Hazard to Aircraft* published by the U.S. Department of the Interior's Fish and Wildlife Service
8. *Condensation Between the Panes of Double Windows* by A. Grant Wilson and E. S. Nowak
9. *Specification For Western Red Cedar Shingle, Machine Grooved Shakes and Handsplit Red Cedar Shakes* published by the Canadian Standards Association

These are less than 10 of the nearly 200 new books and pamphlets we read about, and, although we haven't read them all—yet, we guarantee there is something to suit just about every D.O.T.'er on those well-stacked shelves.

RESCUED FROM ICE BOUND VESSEL

Four men were rescued by a D.O.T. helicopter when their light vessel was helplessly caught in ice off Guyon Island, N.S., on May 1.

Moving ice forced the "Betty Harris" (out of Sydney, N.S.) into shallow water and threatened to crush her. The rescue co-ordination centre at Halifax received an urgent radio message, forwarded it to the departmental ice officer at Sydney and a rescue flight was ordered.

Since the icebreaker CMS *Labrador* was in Sydney harbor her helicopter flew the 25 miles due south to the emergency and spotted the 53-foot fishing vessel. The rescue was effected and the men taken to nearby Forchue, N.S.

ON WORLD TOUR

Dan Ross, met communicator in Vancouver region, is currently on a tour of faraway, story book places while on furlough.

Leaving April 2, via Canadian Pacific Airlines, Mr. Ross included such major ports of call as Tokyo, Hong Kong, Bangkok, Cairo, Athens, Rome, Paris and London on his itinerary.

THE MAIL MUST GO THROUGH

In the Arctic the postman doesn't ring once, let alone twice, but arrangements have been made for D.O.T. employees engaged in 1961 northern operations to receive their mail wherever they may be. The timely delivery of mail is regarded as highly important and is given top priority.

Letters for all officers, men and passengers aboard ships in northern waters—except the CMS *C.D. Howe*—should be sent to a Montreal box address. From there they will be collected by a special dispatcher and forwarded north by every possible means to meet the ships to which they are addressed.

It is important that the name of the vessel appear on the envelope to avoid delay in delivery. Those serving in the Canadian Marine Service should tell friends and relatives to address mail to:

CMS ".....",
P.O. Box 1508,
Place d'Armes Station,
Montreal, Que.

WHAT ONE GAL SAYS ABOUT OTHERS

A secretary describes a secretary as "a diplomat, spelling champion, travel agent, detective, accountant, grammarian, lawyer, psychiatrist, wailing wall and mind reader—all rolled into one well-dressed charming person."

Comments, anyone?

IN MEMORIAM

A member of the 1927-29 Hudson Straits Expeditions under Major N. B. McLean, Joseph Rodolphe O'Malley died in Ottawa, May 19.

Born and educated in the capital city, Mr. O'Malley was associated with the pilotage section of the department for 37 years prior to retiring in 1956. It was during this period that he was on loan to the Arctic expedition which was largely responsible for minimizing the dangers of ice and storms and opening northern waterways for world shipping. In all, he spent more than half a century in government service.

Mr. O'Malley is survived by his widow, Mrs. Marie O'Malley, and two daughters, Marie, on the staff of the department's information services, and Mrs. Ernest Hibberd of Summerside, P.E.I.

BOOKLET GIVES DATA ON RESCUES

An unassuming booklet with a yellow cover bearing the new crest of the Canadian Marine Service holds what could be the key to successful rescue of a ship in distress. Released in April, it deals with search and rescue in the Atlantic area under a new program established by D.O.T.'s marine services.

To the landlubber this booklet opens a world of drama on the high seas—or even the Great Lakes—where a Mayday call presses an entire air and sea search and rescue service into operation.

Instructions tell how to build a do-it-yourself distress signal and radar reflector from scrap metal, how to recognize that an aircraft overhead is trying to direct you to another ship's assistance, and many other useful items.

Prepared by the department, this booklet brings for the first time under one cover—at least as far as small craft are concerned—a comprehensive description of search and rescue procedures, both for those in distress and those going to their assistance.



AWARDED DARTON PRIZE FOR MET. PAPER

Dr. Warren L. Godson, superintendent of atmospheric research, met. branch, has been awarded the 1960 Darton Prize by the Canadian branch of the Royal Meteorological Society for his paper, "Total Ozone and the Middle Stratosphere over Arctic and Sub-Arctic Areas in Winter and Summer."

Dr. Godson has achieved enviable international recognition as a research meteorologist and is active in an executive capacity in several scientific societies and organizations.



A MASTER CHEF—Captain E. S. Brand (left), director of marine operations, congratulates Chief Steward E. Theberge of the CMS Montmorency, while Dr. Yvon Bériault, executive assistant, offers congratulations on behalf of the Minister. Mr. Theberge headed a class of 15 in the fine art of cooking and catering. The all-French class, the second in a series of special training courses for ships cooks and stewards, was held at HMCS Hochelaga in April.



Reg Schroeter (left) happily "pockets" his Suggestion Award cheque, while J. Roy Baxter, director of administration and personnel, holds aloft the certificate of award.

Rewarded For

WINS LARGEST AWARD OF '61 TO DATE

REG. SCHROETER, staff training officer at headquarters, pocketed a cheque for \$285 (less income tax, of course) for a suggestion that will save government departments an estimated \$4,500 a year.

Mr. Schroeter recommended that federal departments, crown agencies, etc., stop declaring value on all shipments whether they be post, air cargo, etc. Citing a section of the Treasury Board Manual that goes back 80 years to 1831, he pointed out that a ruling regarding no insurance on such shipments was in effect, but that because this extra charge appears on express company bills as "value charge" it has apparently not been recognized as insurance.

For example, a 425-pound shipment going from Windsor to Sault Ste. Marie is valued at \$600. Since a charge is made for any declared value over \$50., \$1.20 was levied for \$550 of the value. Without this declaration there would have been no such additional charge. While the \$1.20 in this case seems an insignificant amount, multi-

plied by all the daily shipments going out from government departments, vast savings are possible.

The suggestor strengthened his recommendation by adding that, since the government already underwrites its own risks on buildings and equipment, by doing the same thing for material in transit it would be in keeping with standard policy.

ANOTHER TOP MONEY MAKER

An electrician with the canals branch at Port Hastings, N.S., MICHAEL CHIAVARO, was the happy recipient of a \$180 award in May. It was a proposed modification for the gate operating machinery at the Port Hastings Canal which won this amount for him.

Implementation of his suggestion cut down the wear and cost of maintenance of the mechanical apparatus (struts) and resulted in an estimated saving of \$2,352 yearly. The telling factor of this excellent idea was that to reap such profits it was necessary to spend only \$240 to put the modification into operation.

REDUCES TIME—MAKES \$50.

HERBERT M. MURPHY, a Montreal radio technician, showed that by using a transparent graph sheet for flight checking of glide path width and marker time lights for aircraft instrument landings an average 50.6 minutes could be saved over the methods previously in use.

Since this has proven to be more convenient and accurate, he received a cash award of \$50.

WRENCH MODIFICATION ELIMINATES POSSIBLE DAMAGE

An aircraft mechanic at Ottawa Airport received \$40 for suggesting that dome wrenches used on certain aircraft be modified to prevent possible propeller dome nut damage. KEITH COOKE'S recommendation had further benefits in that it is now possible for one employee to carry out this operation without additional help. Because of its obvious value, Mr. Cooke was awarded \$40.

Ideas..... In Cash Or Kind

A SUGGESTION WHICH COULD SAVE LIVES

PATRICK J. FITZPATRICK, a radio operator at Burin, Nfld., was awarded \$25 for his idea that all distress calls received by coast stations on frequencies 2182 and 500 KCS be rebroadcast on the intership frequency. Since this offers better service and could mean the saving of lives and marine property, the suggestion was put into effect almost immediately.

SELECTS BRIEFCASE AS AWARD

G. H. FETTERLY, a Victoria radio operator, received an award in kind for recommending that the working frequency of Tofino Radio be changed from 430 to 478 kcs and Bull Harbour from 478 to 484 kcs. This was considered to be a good practical suggestion since it eliminated interference between Victoria and Tofino on 430 and, as well, provided a better ship-to-shore service.

Mr. Fetterly chose a cowhide briefcase as his award.

FORM REVISION RESULTS IN AWARD

MISS FERNANDE LANOUEITE received a travel iron for suggesting that Form S.1.24 (Receipt for Payment of Fee For Inspection of a Steamship) be revised to identify the copy going to the inspector at the time of inspection.

Miss Lanouette is a stenographer at Quebec City.

ANOTHER AWARD IN KIND

The Officer-in-charge of Frobisher Marine Aeradio Station, F. V. RYAN, suggested that aircraft accident reports be circulated to all control towers and radio range stations throughout the country.

This was done and Mr. Ryan received a set of Second World War historical books as his award.

HELPS FRIENDLY INTERNATIONAL RELATIONS

RALPH W. WILSON, a student radio operator at Broadview, Saskatchewan,

started his career off on the right foot. He recommended that, since there is a great deal of U.S. tourist traffic going to and from Kenora via International Falls, the Kenora radio range arrange to broadcast International Falls weather on a scheduled basis.

This suggestion was put into effect February 1 and, subsequently, Mr. Wilson received a gas picnic stove as his award.

DESIGNS CHART

CONSTANTROS J. JOANNUS, an engineer with the telecommunications branch at Ottawa, is the proud owner of an electric power driver as the result of a suggestion he made recently.

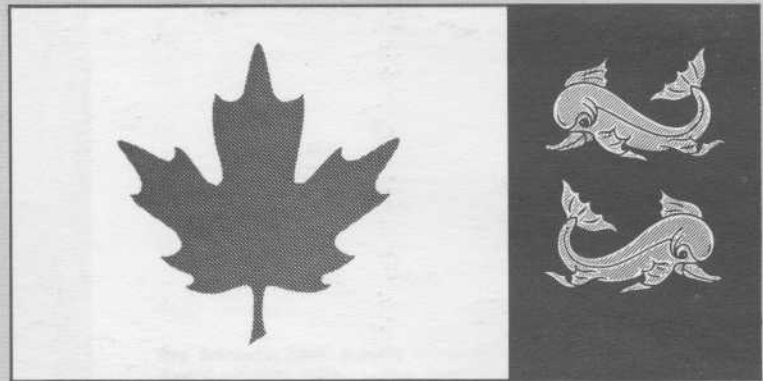
Mr. Joannus submitted a chart to be used by radio technicians when calibrating instrument landing systems. With the adoption of his idea it is no longer necessary for these technicians to manually calculate each computation, thus the possibility of error has been eliminated.



BADGE



MINISTER'S FLAG (MARINE)



JACK

CMS BADGE AND FLAGS

As the ships of the Canadian Marine Service sail into the line of duty they proudly wear these new flags and insignias as a mark of identity.

The colorful, attractive designs shown here have been adopted by the department during the past year. The badge, to be fixed amidships on the foreside of the wheelhouse, is oval in shape and divided vertically into half sections of white and blue. A red maple leaf highlights the white section, while the blue displays two gold dolphins, one facing inward and the other outward.

The dolphin is known as the friend of mariners—considerate of their welfare and sometimes carrying them to safety on its back. While its noble qualities seem at times to have been obscured, it has long been used to denote marine associations and is considered an appropriate symbol for CMS vessels.

Enclosed within a rope frame tied at the base, the badge is surmounted by the Royal Crest to indicate that the CMS is in the service of Her Majesty the Queen.

The design of the five flags (the Jack, the Minister's, Deputy Minister's, Assistant Deputy Minister's (Marine) and Commodore's burgee) is a modification of the badge, with the dolphins being omitted in all but the Jack. The emblem of Canada, the red maple leaf, has, however, been given greater emphasis. It occupies two-thirds of the area of each flag instead of half as in the badge.

The Minister's Flag (Marine) displays the Royal Crown above the maple leaf and, along with the badge design, has received Her Majesty's personal approval.