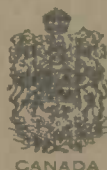


SEP 10 1940

C-1

11-D-02

DEPARTMENT OF  
TRADE AND COMMERCE



**A FACT A DAY ABOUT CANADA**

**FROM THE**

**DOMINION BUREAU OF STATISTICS**

**AUGUST 1940**

**SIXTH SERIES**

---

Published by Authority of the Hon. James A. MacKINNON,  
Minister of Trade and Commerce.

Price 25 cents per annum



## Contents

- |                                    |   |
|------------------------------------|---|
| 306. Yellow Birch for Aircraft     | 322. Sweeping for Mines                 |
| 307. Guns of Sportsmen             | 323. The Nursing Sisters                |
| 308. Canada's War Effort           | 324. Lorries as Workshops               |
| 309. Canada's Reply to Hitler      | 325. Business Conditions During War     |
| 310. Canada's Military Policy      | 326. From German Canadians              |
| 311. By Air and Sea                | 327. Saving the Larch                   |
| 312. Munitions and Supply          | 328. Drilling for Oil                   |
| 313. National Registration         | 329. Farm Woodlots Valuable             |
| 314. Governmental Finance          | 330. Canada Second in Gold Production   |
| 315. On the Home Front             | 331. Canada's Gold Area                 |
| 316. Military Training Plans       | 332. Beds                               |
| 317. Many Trades in Air Force      | 333. Eiderdown                          |
| 318. Air Gunners and Observers - 1 | 334. The Worm Turned                    |
| 319. Air Gunners and Observers - 2 | 335. Pale Western Cutworm in 1941       |
| 320. Watching the Ships            | 336. How Britain Keeps Down Food Prices |
| 321. Fisherman's Reserve           |   |
- 

James Muir,

Editor.

from the

Dominion Bureau of Statistics

No. 306 -- Thurs. Aug. 1, 1940 -- Yellow Birch for Aircraft

Yellow birch is finding increasing use in the construction of aircraft. Radical changes in the design of wooden aircraft, introduced in the past few years, have included the adoption of plywood coverings for wings and fuselages, and experience has shown that Canadian yellow birch is the most suitable of all woods for the manufacture of the extremely thin veneers from which these plywoods must be built up.

Yellow birch is the most important commercial hardwood in Canada. Its principal range in this country lies south of the line drawn from Michipicoten Harbour on the eastern side of Lake Superior to Quebec city, and in the Maritime Provinces. Mature trees reach diameters of from 20 to 30 inches and heights of from 30 to 80 feet, and exceptional specimens may attain a diameter of 36 inches and a height of 100 feet.

The wood is classed among the heavy hardwoods, weighing about 44 pounds per cubic foot in an air-dry condition. In hardness and other mechanical properties it is generally similar to white oak, although it is not quite so tough. It is of uniform texture and works well under tools, qualities which contribute to its suitability for the production of the thinnest of veneers.

The expanded rate of aircraft production has resulted in an increased demand, based on a great need, for yellow birch veneer logs. For so exacting a form of utilization only logs of the highest quality can be used, but Canada's reserves of this valuable war material are great and energetic steps are being taken to secure supplies adequate to the needs of the United Kingdom and of Canadian manufacturers.

The merits of British Columbia Sitka spruce were recognized during the war of 1914-18, and in the present crisis this valuable member of the spruce family is again being used in large quantities in the building of aircraft. Thus Canada is fortunate in having vast resources of the two kinds of woods most suitable for aircraft construction.

---

No. 307 -- Fri. Aug. 2, 1940 -- Guns of Sportsmen

There has been a good deal of misunderstanding about the guns of sportsmen in this year of war. These are the facts.

Sportsmen from the United States and other countries who have been in the habit of visiting Canada for the hunting season or for gun club or trap shooting, may continue to bring their firearms with them under the provisions of an Order in Council which permits the Commissioner of the Royal Canadian Mounted Police to grant individual permits to bona fide tourists. Ordinarily, aliens are prohibited from carrying firearms in Canada or having them in their possession.



Under the new regulations, intending hunters and others desiring to bring their firearms, together with a reasonable supply of ammunition, into the Dominion, are required to apply in advance by letter or telegram to the Commissioner of Customs at Ottawa, or to the Commissioner, Royal Canadian Mounted Police, Ottawa. Each applicant must state his name, address, and occupation; purpose and duration of visit; destination in Canada; description, make, and serial number of each firearm; and the prospective Canadian frontier port of arrival. The application should be supported by suitable references.

The bona fides of the applicant having been satisfactorily established, a permit will be forwarded to the Collector of Customs at the Canadian frontier customs port designated in the tourist's application, where it will be delivered to the tourist on arrival. No permits will be granted for automatic firearms, and ammunition imported is subject to the regular customs charges.

---

No. 308 --- Sat. Aug. 3, 1940 --- Canada's War Effort

Here is a handy summary of what Canada has done in the War and what it is proposed to do. Compare it with the first statement made some weeks ago and it will provide a note of progress.

1. Canada will shortly have a corps of two complete divisions and ancillary troops in the British Isles.
2. Would not serve common cause at this time to have additional Canadian forces added to this corps. Need in England is not manpower but equipment. Third and Fourth Divisions will be trained and equipped in Canada.
3. Recruiting for non-permanent active militia in Canada will be suspended from August 15. Thereafter men will enter militia on call under National Resources Mobilisation Act.
4. Compulsory training of men called, starts October 1, with 30,000 a month called and trained thereafter.
5. Compulsory training period; 30 days; pay, \$1.20 a day. First call probably men of 21 and 22 years.
6. All unmarried men in Canada between 21 and 45 years and physically fit may have to take 30 days military training within one year.
7. Canada can train 1,000,000 men under this system and not dislocate industry and primary products.
8. Defence department requirements may be met by calling up during first year single men from 21 to 35 years.
9. National registration boards for each military district and one for Prince Edward Island to be created with jurisdiction for calling up men.
10. All employers must, under penalty, put employees back in jobs or equivalent positions on completion of training period.

11. Total strength Canadian Active Service Force on July 21 both home and overseas, was 133,572. In five weeks, over 42,000 recruited for active service.
12. Britain prepared to resume almost at once shipments of training type planes urgently needed for Commonwealth Air Training Plan.
13. Royal Canadian Air Force strength at July 24: 1,765 officers; 17,688 airmen; 2,558 civilians. Twenty-two schools in operation.
14. Destroyer H.M.C.S. Fraser lost off Bordeaux has been replaced. Replacement will shortly be in commission.
15. Two new destroyers under construction in Great Britain for Canadian navy. Three merchant vessels are being converted into armed cruisers.
16. Strength Canadian Navy: 9,000 officers and men with 113 vessels. In near future 100 vessels will be added.
17. Canadian factories to produce airplanes at 360 a month early next year.
18. "Mark III" tanks to be produced at rate of 30 a month as soon as plant equipment is completed.
19. Artillery plant at cost of \$10,000,000 to be largest and most modern in British Empire.
20. Plants now under construction at cost of \$120,000,000 will have productive capacity of \$500,000,000 worth of goods a year.
21. Shipbuilding programme costing \$50,000,000 progressing satisfactorily.
22. Canada probably producing greater volume of automotive equipment than any country in world at 600 mechanized units a day.
23. War programme will require an expenditure of \$150,000,000 to \$200,000,000 this year in addition to the \$700,000,000 provided for war by Parliament.
24. Total sale of war savings certificates to July 27 had a face value of \$16,690,435.

---

No. 309 -- Sun. Aug. 4, 1940 -- Canada's Reply to Hitler

Canada's reply to Hitler strikes a note that should find instant response in every Canadian heart. Addressing the House of Commons, the Prime Minister described Hitler's speech before the Reichstag as "abounding in the historical falsehoods which have characterized his utterances since the outbreak of war... His words have been a succession of promises made and of promises broken. His works have been cruelty, rapine, bloodshed and violence."

The speech called for no words in reply, said Mr. Mackenzie King. It answered itself. The peace that would finally come to the world would not be



that "false Nazi peace where men move amid the hushed suspense of fear in the presence of the spy, the gangster and the Gestapo. Above all, it would never be a peace based on a conception of subordination of individual personality to the control of a materialistic and warlike state. It would be a peace which would re-establish liberty and re-affirm the rights of men.

"It will be a peace under which men and women can speak the truth in their hearts and live their lives without fear; a peace in which labour will have dignity, religion will have freedom, and little children will have security.

"The nations of the British Commonwealth have no doubt had many failings, but they have loved and honoured justice and mercy. Today they do not fight for power, they do not fight for the preservation of any form of government, they fight the battle of mankind. The battle ground has moved to the very home of freedom itself.

"There now the great qualities of the people of the British Isles shine more brightly than ever. The invasion of those islands will be the invasion of the sanctuaries of all free men. Their invader is our invader.

"Canadians are prouder than ever to share with the men and women of Britain the rigors of the conflict, and to stand shoulder to shoulder with them in the defence of social justice and of human liberty."

"I am sure the House will welcome the declaration made by the Prime Minister," commented Hon. R. B. Hanson, Conservative leader.

---

No. 310 -- Mon. Aug. 5, 1940 -- Canada's Military Policy

Hon. J. L. Ralston, Minister of Defence, informed the House of Commons that Canada's Military policy, to be continued and intensified, was maximum development of all Canada's resources in man power, weapons, equipment and training facilities. The objective is that Canada may throw its increasing military power into the scale in the most effective manner and in the minimum of time. Colonel Ralston gave this as the general order of priority:

"First the re-strengthening and the adequate organization of our fixed and mobile defences and our armed forces in the area of our Eastern Seaboard and of the approaches of the St. Lawrence. As will be immediately recognized, this is our most vulnerable area. Measures have been taken accordingly, and I can announce that a Command Headquarters is being set up immediately in the Maritimes, to organize, control and co-ordinate for operational purposes the forces in this area. These will include the Canadian Active Service Force and the Non-Permanent Militia Forces which are or will be located there. The object is to use them to the best advantage, in conjunction with the coast defence forces, wherever an attack may threaten. Included in this Command will be the Canadian Forces in Newfoundland.

"I need hardly say that in presently concentrating increased energies on the requirements of our East Coast, it is not to be assumed for an instant that the continued strengthening of our West Coast defences is being in any way overlooked.

Secondly, but of equal importance, and only secondary in the matter of immediate urgency, is the continued concentration of our resources on the training and equipping of the Canadian Active Service Force now organized in this country. Where these troops will eventually serve depends, of course, on the developments of the future. In the meantime, our policy is to continue the training and equipping of these units eventually as divisions, so that they may be ready for operations in whatever theatre they may be required, either in Canada or overseas. The front line is the Island Fortress of the British Isles and we will shortly have a Corps of two complete Divisions and ancillary troops in that front line. The House may be interested to know that my advisers are definitely of the opinion that it would not serve the common cause at this time to have additional Canadian Forces added to such a Corps. It must be remembered that there is at the moment no shortage of manpower in England. The real demand is for equipment.

"I am giving away no secret when I state that it is impossible for the United Kingdom to make up in two or three weeks the losses of equipment suffered by the gallant British Expeditionary Force during its epic struggle in, and subsequent withdrawal from France.

"Consequently, quite apart from any question of Canadian security we can make our best contribution at the present by training and equipping our 3rd and 4th Divisions in the Country. And so the "drive" is to bring the training and equipment of the Divisions now organized in this Country to the highest possible level in order that they may quickly be available for active operations, whenever or wherever the call may come for their services.

"Thirdly, we must provide the maximum preliminary training for the available manpower of Canada. It is obvious that this is a primary and essential step in the preparation of the citizens of this Country for the ultimate duty they may be called upon to perform -- that of defending their hearths and their homes against the possible attack of a ruthless enemy. That step is being taken now and is one of the purposes of the National Resources Mobilization Act.

"Fourthly, we must not for a moment lose sight of the necessity in certain instances of military protection to vulnerable points and the relation of the military forces to internal security. The matter of internal security is principally a police problem, but we are so arranging our organization that there shall be no gap between the responsibility of the police and the responsibility of the military forces to assist."

---

No. 311 -- Tues. Aug. 6, 1940 -- By Air and Sea

What Canada is doing in the air and at sea was outlined to the House of Commons by Hon. C. G. Power, Minister of National Defence for Air. He told how the turn of events in Europe had prompted speeding up in many ways of the British Commonwealth Air Training Plan. Personnel had been increased. Construction had been undertaken ahead of time. Schools were being opened months before the dates of schedule. Today, there were twenty-two schools in operation, although the original plan called for operation at this time of only fifteen. Eight elementary flying training schools were operating in place of two. Two initial training schools were operating in place of one. Besides the various types of schools, there were in operation twenty recruiting centres, three manning depots, three equipment depots and one repair depot.



Plans have been completed to finish construction this year of all aerodromes, hangars and other buildings for all schools scheduled to open in 1941, whereas much of this work was going to be carried out next year.

Mr. Power related, too, how ships of the Canadian navy had had their full share of onerous and dangerous duties since the outbreak of war. Some had been assigned to the Atlantic patrol, carrying out their important work in all sorts of weather with remarkable efficiency and conspicuous courage. Others had done duty in Caribbean waters. One destroyer, the Fraser, went down in a collision off Bordeaux. Forty-five of her crew were lost. Another Canadian destroyer, the Restigouche, distinguished herself rescuing survivors of the Arandora Star which was lost while carrying interned aliens.

---

No. 312 -- Wed. Aug. 7, 1940 -- Munitions and Supply

"Canada's industrial tempo is at the highest peak in our history," Hon. C. D. Howe, Minister of Munitions and Supply, told the House of Commons as he described how Canada aimed to be self-contained in the production of war material. During the past few months, machine tools had been bought in the United States and Canada in a volume which challenged imagination. And today's production, great as it was, was small as compared with what productive capacity would be six months hence.

Sixteen shipyards were carrying out a construction programme for larger warships. Major naval programme included 54 corvettes for the Royal Canadian Navy to the amount of \$29,400,000; 10 corvettes for the Royal Navy amounting to \$5,500,000 and 28 minesweepers for the Royal Canadian Navy amounting to \$18,500,000. Of the corvettes, several had already been launched. Ten more would be launched within the next five weeks.

Three fast passenger vessels were being converted into armed merchant cruisers at a cost of \$1,700,000.

Expected cost of aerodrome constructions on the 77 projects approved was \$15,500,000. Up to the present, the projects had involved purchase of 30,000 acres of land at a cost of approximately \$2,000,000. Grading of the aerodromes would involve moving 14,500,000 cubic yards of earth. The paving programme was equivalent to nearly 700 miles of standard highway, 21 feet wide.

Last week, Canadian factories delivered 25 finished aircraft. Eight Canadian aircraft companies had in hand orders totalling 3,200 planes of which 257 had been delivered. Contracts in hand involved approximately 110 million dollars. A production of 360 planes per month, or about 12 planes per day, was expected by early in 1941.

Perhaps no country in the world was producing automotive equipment in the volume that now obtained in Canada. Canadian Government orders now placed for mechanical transport alone amounted to \$54,500,000. Great Britain, South Africa, India and other parts of the British Empire were also large buyers.

British and Canadian orders were in hand for "Mark III" infantry tanks to a total value of \$63,000,000.

Mr. Howe also gave these figures: "Since the outbreak of war, this department and its predecessor boards have purchased over 18 million yards of woollen and cotton cloth, enough to stretch from Ottawa to Berlin and back again. This has been, or is being, manufactured into 400,000 service battle dress uniforms, 225,000 summer battle dress uniforms, 383,000 overcoats, winter and summer underwear and other items of clothing. Orders have been placed for 850,000 pairs of boots and shoes and production has been stepped up to 30,000 pairs per week. Production of battle dress is reaching 20,000 suits per week. Blankets are being produced at the rate of 30,000 per week; braces 18,000 per week; caps 18,000 per week; service shirts 12,500 per week; and greatcoats 7,000 per week.

"It may be interesting to note in passing that 350,000 cattle have contributed their skins to make the necessary quantity of shoes worn by the army, the navy and the air force."

---

No. 313 --- Thurs. Aug. 8, 1940 --- National Registration

Hon. J. G. Gardiner, Minister of National War Services, explaining plans for National Registration and calls for compulsory military training to the House of Commons, said that as soon as possible after it was ascertained that year classes would have to be called to meet the first demand of the Department of National Defence, a proclamation would be issued, warning all persons within such classes, commencing with the 21-year-old class, that they would be called for service within a certain designated time. The whole scheme, in broad terms, meant that:

- (a) As a result of the national registration the numbers of single men between the ages of 21 and 45 throughout Canada, and the number in each age class would be known.
- (b) The military authorities decide the number of men they propose to train within the next year.
- (c) Every medically fit male Canadian, subject to stated exceptions, between the said ages, up to the number the Department of National Defence can train, will be called up during the year for a period of thirty days training.
- (d) This will apply to every person, regardless of his occupation or any other consideration, save the small excepted list.
- (e) There will likely be eight calls within a year, and the age classes will be called up in consecutive order, and all must be trained within the year.

The exceptions are:

- (a) Judges of superior, district, or county courts of justice;
- (b) Regular clergymen or ministers of religious denominations, members of the clergy or religious orders;
- (c) Members of the naval, military, or air forces of Canada on active service;



- (d) Those who, in the opinion of the Minister of National Defence, have already received military training, within the previous twelve months, at least equivalent to that to be given to men being called up under these regulations;
- (e) Members of the Royal Canadian Mounted Police or provincial police forces;
- (f) Members of the police forces and fire brigades permanently employed in any incorporated city.
- (g) Wardens and officers of all penitentiaries, prisons, and lunatic asylums or mental hospitals.

The Government also proposes to recognize Orders in Council passed in 1873 granting certain privileges to Mennonites in Regard to military service.

---

No. 314 -- Fri. Aug. 9, 1940 -- Governmental Finance

Hon. J. L. Ilsley, Minister of Finance, gave these as the main features of the government's financial activities since war was declared:

- (1) At the September session a war appropriation of a hundred million dollars, with provision of the necessary borrowing powers to the government and enactment at that session of the first new war taxes indicating the main lines of the government's taxation policies.
- (2) The establishment in September of various economic organizations, including the war-time prices and trade board and the foreign exchange control board.
- (3) A moderate and carefully controlled expansion of money and credit during the first three months of the war.
- (4) The negotiation of a loan of two hundred million dollars from the chartered banks upon an issue of two-year two per cent notes.
- (5) Repatriation of ninety-two million dollars of Dominion government securities for the purpose of providing the British government with Canadian dollars with which to make purchases in this country.
- (6) Various other financial arrangements with the United Kingdom, including those connected with the British Commonwealth Air Training Scheme.
- (7) The first public war loan in January, which took the form of three and one-quarter per cent bonds issued at par, redeemable by lot over the five years from 1948 to 1952, and which resulted in a prompt and substantial over-subscription for the two hundred million dollars required in cash.
- (8) Unexpectedly buoyant revenues during the latter part of the fiscal year, enabling us to end the fiscal year with a deficit about seventy million dollars less than was anticipated in September and with a very strong cash position.



- (9) A reduction in the estimates for non-war expenditures for the new fiscal year to 448 million dollars from the comparable figure of 525 million dollars for the previous year.
- (10) Transfer in April to the foreign exchange control board of all our available holdings of gold and foreign exchange, including both private holdings and those of the Bank of Canada.

---

No. 315 -- Sat. Aug 10, 1940 -- On the Home Front

In one year, under the new plan, approximately 300,000 men will have received initial military training. These 300,000 men are to be regarded as the vanguard of a mighty Canadian Army which will be available to defend this country.

There are difficulties in withdrawing so many men from the normal life of the community even for the comparatively short period of training but difficulties cannot be allowed to obscure the goal to be reached. This is the beginning, not the end, of a policy. The plan has been worked out so that it can be speeded-up or slowed down as events require.

There are difficulties, also, in building quarters and manufacturing the equipment for this citizen army. Every effort is being made to guard against failure on either count.

One of the difficulties of the scheme is the shortage of competent instructors to train these men. Several thousand instructors will be needed. The problem has been foreseen and some schools have already been established. The instructors are being drawn from N.P.A.M. units and ex-service men.

This policy has been evolved to cause the minimum dislocation to industry. The rule will be that there can be no exemptions. Any postponements must be so arranged that everyone within the groups called who is physically fit must undergo training within a year. Physical fitness is defined as everyone classified by military medical standards as being C. 1 or better.

No distinction of any kind will be made between the new recruits, thus drafted, and the rest of the militia - except that the men called under this plan will not be available for duty outside of Canada unless they volunteer for such service. It is important that from the outset these men be regarded as members of the Canadian army. As recruits they will pass directly into the militia regiments. Automatically they will become members of the Canadian militia in their own right. They will share its traditions and be the custodians of its honor.

There is no intention of treating these men as so many human units to be put through a stamping machine and turned out as military robots. Every opportunity will be taken to cultivate our Canadian endowment of initiative, resourcefulness and self-reliance.

---

No. 316 -- Sun. Aug. 11, 1940 -- Military Training Plans

The magnitude of Canada's military training plans under the new National Registration scheme is disclosed by the following table. It shows the approximate picture of this enormous undertaking as it will likely affect the various sections of the Dominion. The table breaks down the total into figures for each military district. It will be seen that all districts both east and west will be called upon to play an important part in this vast plan.

The table also shows that each training centre will be amply staffed by both training and administrative personnel to ensure that the maximum benefit will be received by the men in training and that their welfare will be properly administered.

<u>Military District</u>	<u>Approx. No. of Tr. Centres</u>	<u>No. of Training Companies</u>	<u>Staff Admst. &amp; Instrl.</u>	<u>Men Training Per 30-day Period</u>	<u>Men Trained Over Total of 10 Periods</u>
1	3	12	546	3,000	30,000
2	4	16	728	4,000	40,000
3	2	9	388	2,250	22,500
4	6	24	1092	6,000	60,000
5	3	12	546	3,000	30,000
6	2	8	364	2,000	20,000
7	1	4	182	1,000	10,000
10	3	10	479	2,500	25,000
11	2	8	364	2,000	20,000
12	2	8	364	2,000	20,000
13	2	8	364	2,000	20,000
<hr/>					
TOTAL ALL Districts	30	119	5,417	29,750+	297,500

+ - Instructional and Administrative Staff, approximately : 900 Officers  
1830 N.C.O. Instructors  
300 Admst. N.C.O.'s (Sgt. Cooks, Provost, Q.M. Etc.)  
2387 Clerks, Cooks, Butchers, Orderlies, Etc.

No. 317 -- Mon. Aug. 12, 1940 -- Many Trades in Air Force

In the British Commonwealth Air Training Plan it is estimated that one in ten airmen, forming the complement of a "flight", can be classed as pilots. Organization and administration, repair and inspection of aircraft and equipment, aeronautical development and a multitude of other duties absorb the services of many men vital to the actual flying operations.

Hence a wide variety of occupations and trades are being incorporated into the Air Force. Qualifications for some of these illustrate the highly specialized nature of work. Aero engine mechanics, with a thorough knowledge of internal combustion engines and familiar with the methods of fitting bearings, piston and piston rings, valve grinding and engine timing, are required to keep the equipment in top shape. Then there are armament artificers, highly qualified mechanics with scientific knowledge.

Men taken on as clerks must be stenographers familiar with filing systems and general accounting.

The term disciplinarian has been applied to men who will have charge of the physical training of recruits.

Electricians in the Air Force are expected to have a working knowledge of motors, generators and batteries and a practical knowledge of materials used in the trade. The electrician must be able to diagnose faults in circuits and electrical apparatus, and read wiring diagrams.

The fabric worker must be familiar with cutting, machining and the fitting of fabric to aircraft, be capable to sewing by hand and of applying all types of paints, dopes and varnishes.

A knowledge of the heat treatment of tools, springs and instrument parts is a necessary qualification for instrument repairers. They must know the physical properties of materials used in instruments with a knowledge of electricity, magnetism, general physics and mechanics.

The machinist must be proficient in the handling of lathes, milling machines, shapers, grinders and planers.

Motor transport mechanics, besides proficiency in repairing and overhauling trucks, must have a knowledge of map reading, police and highway regulations.

The metal worker and the metal airframe mechanic must be familiar with the use and maintenance of hand tools and shop equipment, understand working drawings and elementary geometry as applied to sheet metal work, have a knowledge of rivetting, panel beating, planishing, flanging, brazing and soft soldering and acetylene welding.

Wireless and electrical mechanics should have sufficient knowledge of elementary electricity, magnetism and radio principles to manipulate wireless apparatus in common use. They must be capable of sending and receiving Morse at the rate of 18 words per minute. "Ham" operators, as amateur radio enthusiasts are called, may find in the R.C.A.F. an excellent outlet for their energies and ability.



Photography is of vital importance to the Air Force in modern warfare. To qualify as a photographer the recruit should be familiar with the history and characteristics of lenses and filters, have had experience in the use of different types of cameras and printing equipment, and understand the handling and chemistry of film development.

The airmen engaged in these trades and occupations within the Air Force make an important contribution to the training of pilots, air gunners and air observers.

---

No. 318 -- Tues. Aug. 13, 1940 -- Air Gunners and Observers - 1

Air Gunners and Air Observers, unsung heroes of the first great war, have come into their own in the modern style of sky fighting. A Royal Canadian Air Force crew works with all the close co-ordination of a football team in this new war.

The gunners and observers share the pages of Air Force gallantry along with the pilots. It is "all for one and one for all", since the pilot of today cannot carry out his mission without the aid of his gunners for protection and wireless communication and his observers for navigation, bombing, photography and observation.

The Royal Air Force innovation of a multiple-gun power turret mounted in an aeroplane has enabled keen-eyed air gunners of the Empire air forces to take deadly toll of enemy aircraft with slashing broadsides of machine-gun fire like a salvo from a battleship's heavy guns.

The four-gun turrets make Britain's latest fighters and bombers literally battleships of the air. Just as the R.A.F. was first to arm single seat fighters with a devastating volume of fire from eight machine guns mounted in the wing, the power turrets now provide the larger planes with a deadlier weapon than their antagonists.

The air gunner is of tremendous importance in this war. Bombing and reconnaissance aircraft carrying the Empire's insignia on their wings make a formidable foe, as tremendous German air losses in recent massed fighting over France indisputably proved.

The Boulton and Paul Defiant, newest two seater fighter, is essentially an aeroplane for the gunner. The shooting is left to the gunner enclosed in the power turret just behind the pilot's seat. Four machine guns each capable of a rate of 1,200 rounds a minute poke from the turret, which revolves automatically at the touch of a control. He can fire forward, upward, downward on each side, and sweep a hail of nickel-jacketed death at the rate of 80 bullets a second at any plane crossing the tail of his own machine. As the line of fire crosses his own rudder and tail fins, the guns cease fire automatically, resuming their clatter when safely past the tail assembly.

Defiants, similar in appearance to the single seater Spitfires, mixed with spitfire formations during the fierce air fighting over Dunkirk. Swarms of German fighters dove at the "Spitfire" from the rear in anticipation of easy victory, but met a stinging fire from the Defiants' four-gun turrets while the real spitfires, secure as to defence behind, opened up with their eight wing guns at anything that

lay in front of the mixed formation. One squadron of 12 Defiants knocked down 50 German planes in two days without losing one of their own number.

Big British Bombers and flying boats mount power turrets in their noses, as "blisters" on the top of the fuselage, and as a sting in the tail. Their gunners, battling against numerical superiority of the enemy, have made scores easily comparable to the individual tallies of the fighter pilots in Hurricanes and Spitfires.

---

No. 319 --- Wed. Aug. 14, 1940 --- Air Gunners and Observers - 2

Gunners, like air observers, have more than one job to do in the modern air force. The aircraft's crew must function with the team work and precision of a star formation flying squadron at a peacetime air display.

Gunners are wireless operators, too. By their radio they keep in touch with ground control stations and with other planes in the formation. While war planes keep radios silent as much as possible to avoid detection, once the enemy is sighted, the radio crackles orders. The voice of the formation commander issues movement orders just as a naval commander marshals his vessels into battle array.

On more prosaic missions of co-operating with army and navy, the wireless operator relays to artillery batteries and ground commanders what those in his plane can see, spotting artillery fire and revealing movements of enemy forces, operators working with the fleet or on convoy duty relay information of an enemy submarine or other raider sighted.

Air observers become air navigators and air bombers when their trained eyes are not sweeping the world below, sketching maps or taking aerial photographs. As navigators, it is their responsibility to lay the course through fog and rain or blackness of night from the home base to the objective, and, once there, to lead the crew safely home again. They are also skilled in using the complex electrical bombsight, lying prone with an eye glued to the bombsight aiming through a glass window in the floor. A finger touch on a button close at hand opens the bomb ports, sending the missiles plunging to the target.

Arduous training goes into the making of air gunners and observers. Thousands of physically fit young men aged from 18 to 32 will receive such training under the British Commonwealth Air Training Plan in Canada.

The prospective air gunners and observers report to a manning depot, where they receive uniforms and kit, learn to salute and drill for two weeks or so. The next step is four weeks in an initial training school for a more formal introduction to Air Force life.

They next go to specialized schools. Air observers proceed to one of 10 air observers schools for 12 weeks of intensive study of the intricacies of air navigation, reconnaissance work and photography. Then follow six weeks of bombing and gunnery school, of which there are 10, and then a course of four weeks at one of the two air navigation schools for advanced studies in that subject. The total course for an air observer takes 26 weeks, shortest of all air crewman.



The future air gunners are posted to one of the four wireless schools for 24 weeks of radio work, both code and voice. They get a more intimate knowledge of air marksmanship and bomb dropping at the bombing and gunnery schools, a course of four weeks in their case, before they proceed to join the observers and pilots in the pool to await a draft to call them for overseas service.

---

No. 320 -- Thurs. Aug. 15, 1940 -- Watching the Ships

During 24 hours of every war-troubled day an unimpressive little vessel of drab grey, sister to craft spotted at all of Canada's ocean harbours, bobs and tosses in the waves of the Atlantic just off the entrance to an east coast port.

The insignificance of the little vessel is sharply accentuated every time one of the lean, grim ships of the British or Canadian fleet slips past her.

But with all of her humble appearance, she commands the respect and immediate attention of every merchant ship, be it proud liner or rusty tramp.

She is the examination vessel of the Royal Canadian Navy and to disobey her warning to stop would bring a hail of shrieking steel from the ever-ready muzzles of coastal batteries concealed among the pleasant green foliage of the shoreline.

In many ways, it is a monotonous job for the crew of the little craft, lying at anchor day in and day out while fog lifts and falls and the fretful winds of the North Atlantic moan through the rigging and pluck at the special signal flag of the examination service that flies from the mast. But often it is an extremely busy job, when ship after ship comes up from beyond the horizon, sometimes at the rate of more than one an hour.

Each new-comer reaching the range of the signal lamp aboard the examination vessel is greeted by a series of winks and blinks that informs him he is to stand by to receive an examining officer. Occasionally, by accident or design, incoming vessels have ignored the signals, only to receive a much more pointed order in the shape of a light shell across the bow from a coastal gun crew that has been sitting with itchy trigger-fingers ever since war began. When the incoming vessel hoves to, the boarding party leaves the examination craft in a small boat and rows to the side of the visitor. For the next few minutes the boarding officer is closeted with the ship's officers while papers are produced and carefully inspected.

If everything is in good order, the boarding officer returns to the examination vessel and the "O.K." signal starts its rounds. Within a few moments every officer in charge of the defences of the port knows who the visitor is and all about him. It is then, and only then, that the anti-submarine gates are swung open and the visiting vessel is allowed to pass into the sheltered harbour.

Despite the grim necessities of war, courtesy characterizes the examination process. It is a brand of politeness that is at all times associated with naval men. When the formalities are over, they are invariably followed by handshakes and grins. Sometimes, when the ship is not British or American, language difficulties arise, but, according to the examining officers, few are the skippers on the seven seas who haven't acquired enough English to understand or make themselves understood.



Night and day, throughout the year, these watchdogs at Canada's Atlantic doorway carry on their duty. Their job is not one surrounded by the glory that accompanies the dashing destroyer or the floating fortress, but their part is no less vital in the far-flung pattern of defence formed by the "silent service" of the Empire.

No. 321 -- Fri. Aug. 16, 1940 -- Fisherman's Reserve

When the deck's covered with fish scales the gas powered fish boat looks useful but not beautiful. But dress her up with a coat of grey paint, give the commander the rank of "Skipper" and she becomes one of the units of the Royal Canadian Navy and is proud of it! From a drab she becomes a lady with a certificate of character. Proudly she flies the naval ensign and with her engine beating its slow explosions over the tide, breasts the waters of a coastal port on her way to do a little job for His Majesty.

Up the sharp indented but lengthy fjords of the Pacific Coast she noses her deliberate way, to see all if possible, to hear all and report "All's well" to headquarters. Every fishing village, Indian village, lumber town, mine centre and logging camp knows her now. The skipper's white-topped naval cap will gleam in the sunshine, his normally uncaring crew in the smart uniforms of regular naval ratings will "tie her to the wharf", gaining new and unaccustomed prestige from their familiars of other days, when they were merely "hands."

That's what a war can do. It can trim the sloppy - used in no depreciatory sense - craft of the fisherman into smart naval units, an analogous procedure on the sea to that on land, by which the peaceful toiler is turned out, in battle dress, as a soldier. And as the landsmen can be made to complete his military evolutions smartly and efficiently, so the fishermen's boats can manoeuvre together on the water. In line abreast, in quarter line, in line ahead, these vessels chug-chug their way on order, emulating as smartly and as proudly, their bigger sisters of the service. They can scout, manoeuvre, sweep for mines or lay depth charges against submarines. Their Lewis guns or rifles will shatter the drifting menace of a hostile mine or take care of their own defence.

"Fisherman's Reserve", that is what they become in official terms. Each has its number and its job. War called them from peace to a job they could do for the country, and there they are, spread from Cape Flattery to Alaska, alert and resourceful. Not wishing it out loud perhaps, but inwardly hoping that if there is any dirty work by the enemy, they will be there to cope with it.

In the boats with which they are familiar, for in most cases they own them, the skippers set out. That is their rank, "Skipper" and officially their boats are "reserve boats". Their crew usually includes a petty officer and two, three or four seamen depending on the size of the vessel. These may be reservists with naval experience, but generally they are the hands who have been accustomed to working with the "Skipper" and his boat in peacetime. They all receive as much training as is possible to give them. But this is incidental. Their great value lies in several other qualities of which may be cited, mobility, manoeuvrability in shallow coastal waters, the knowledge of the personnel of the coast, bays, and harbors and their familiarity with all that pertains to the sea.

The Fishermen's Reserve was an inspiration and its utility in this war is no less pronounced than the pride of the men in being able thus to serve their country.

No. 322 -- Sat. Aug. 17, 1940 -- Sweeping for Mines

Most monotonous job in the Royal Canadian Navy is performed by the stubby-hulled little vessels that buck the gales of the Atlantic to keep Canada's harbour approaches free from mines.

Hour after hour, summer and winter, they wallow and strain through the seas dragging their mine-sweeping equipment behind them. Their crews know that, at present, their chances of snaring a mine are small, but they also know that a crop of death might be sown beneath the surface of the sea at any time. On the Atlantic coast these minesweepers keep clean some of the busiest shipping channels in the world, channels that carry men and material of countless value to the Motherland in her life-and-death struggle.

The day of a minesweeper starts shortly after the first rays of the sun spread across the chilly waters of the North Atlantic. Even during these summer days the ocean winds are cool enough to make necessary the wearing of heavy coats and mufflers. The skipper has already received a chart telling him which channels must be swept during the day. The sweepers usually work in teams of three and four. The senior ship takes the lead and the others spread out behind her in echelon, so that each sweeps part of a wide channel.

The mine-sweeping equipment is so arranged that anchored mines are snipped from their moorings whenever the long drag-line comes into contact with their cables, and guides them to the special cutting apparatus. When they bob to the surface after their line has been severed, they may be destroyed with rifle fire or perhaps taken with extreme care into port for examination.

Each minesweeper carries on its forward deck a gun capable of delivering a severe blow if the necessity arises. At the stern are carried a number of depth charges. They are thus prepared for encounters with submarines whether the latter be on the surface or under water.

Stout little ships, they operate in all kinds of weather conditions with the exception of dense fog, when a mine might be cut adrift without the knowledge of the crew. Possibility of collision is another of the factors keeping the minesweeper in port when the fog banks roll in from the Atlantic.

When weather conditions are favourable, the sweepers labour up and down the channels from dawn until far past the setting of the sun. Not until actual darkness has arrived do they point their blunt steel noses homeward. There they wait until sunrise for another trip in search of the black globes of destruction which may be lurking beneath the surface of the sea.

---

No. 323 --- Sun. Aug. 18, 1940 --- The Nursing Sisters

No branch of the military service is regarded with more respect or recalled with deeper memory by veteran soldiers than the Nursing Service of the Royal Canadian Army Medical Corps. The nature of the work done by the Nursing Sisters, their devotion and untiring energy have left an indelible record to soften the grim tragedies of sickness and injuries in war.



In peace time, the Permanent Force Nursing Service on duty in Canada is very small, being comprised of one Matron and ten Nursing Sisters and in most stations one Nursing Sister only. The Medical Officers, Sisters and non-commissioned officers in Military Hospitals hold courses to qualify nurses for the Royal Canadian Army Medical Corps, Non-Permanent. These Nursing Sisters, after passing required examinations, are called to the Military Hospitals when needed for special cases, camp or relief. Keenly interested in military work; they have taken a month's course, attended lectures and spent specified time on duty in the wards without pay. In this way there is a steady flow of new graduates who understand military routine.

When overseas, the Nursing Sisters are stationed in general hospitals, stationary hospitals, casualty clearing stations behind the lines, and may be posted to hospital ships or ambulance trains. The duties of a Nursing Sister in a military hospital unit are in many ways the same as in a civil institution, but naturally conditions vary in war nursing, and the adaptable nurse proves most useful. She must be able to instruct orderlies in nursing duties as a number of these may be untrained when sent to her ward.

Quarters and mess of Nursing Sisters are made as comfortable as circumstances permit. In larger units there is usually a Home Sister on duty to supervise the home, teach maids, if these are supplied, help in entertaining and generally make the Sister's life as agreeable as possible.

The dominating color in the Nursing Sister's uniform is blue. She wears a tunic of mid-blue gabardine, a great-coat of dark-blue melton or broadcloth, a recreation dress of navy blue serge coat and skirt. A navy blue felt hat, with a corded ribbon and narrow brim tops the attire. The hat for summer wear will be white felt. R.C.A.M.C. badge is borne on the front of the hat. Gilt badges of rank on each shoulder strap of the tunic and great-coat are worn as follows: Matron-in-chief, a crown; Matrons, three stars; Nursing Sisters, two stars.

---

No. 324 -- Mon. Aug. 19, 1940 -- Lorries as Workshops

Mechanization is the keynote of modern warfare. Wars of movement are fought on heavy rubber tires and steel caterpillar threads. Fighting vehicles and mechanized transport must be kept in readiness at all times to speed troops across all types of terrain, ranging from smooth concrete highways to brush country and ploughed fields.

All this means service. Armies and army divisions cannot count on wayside garages and service stations to do their repair and re-fuelling jobs. To meet these needs the Department of National Defence has introduced specialized units and equipment as part of its Army Field Workshops.

Each army division in the field is accompanied by two complete motor transport lorries. Each is the equivalent of a modern city garage. Designed by the Department's technical staff, each unit has a special steel body mounted on six wheels with four wheel drive and heavy duty chassis.

Each workshop lorry is equipped with its own electrical plant, to operate electric grinders, drills, refacers, lathes, brake servicing equipment and other tools.



Lubrication, battery service and overhauling facilities, including the boring of cylinders, the fitting of pistons, valve grinding and welding are provided in this modern garage on wheels.

All tools required, specially designed by the Department's technical experts with a view to portability, are part of each lorry unit.

According to the Department of National Defence, Canada's is the first army to adapt such units to regular Army divisions.

---

No. 325 -- Tues. Aug. 20, 1940 -- Business Conditions During War

How war affects business and business conditions is well illustrated by comparison between the first six months of 1940 and the corresponding six months of 1939. It is a subject over which disputes constantly arise.

Generally speaking, business operations were over 18 per cent greater than in 1939, and the upward trend has been well maintained month by month. As to be expected, a development of importance was the shift from the production of goods intended for consumption by the general public, or what are technically known as consumers' goods, to commodities intended for consumption by producers. Wherewithal for the factories, partially manufactured goods are an example of producers' commodities.

These indicate clearly the effect of war on industrial expansion, and war orders persistently placed since the outbreak are now having an important bearing on industrial activity. A number of new plants under construction and existing plants engaged in war demands are accelerating operations. Manufacturing production rose nearly 25 per cent.

A marked increase was shown in wholesale prices commencing immediately upon the declaration of war. The advance continued to the first quarter of the present year but recently speculative commodities have shown some recession. The increase in customs and excise duties is leading to increases in certain commodities, while lack of sufficient demand for grain and a number of other items unessential to military operations has led to recessions of sufficient importance to counterbalance the advances in other lines.

As to be expected, the primary iron and steel industry had a very marked advance. Steel ingots rose 65 per cent and pig iron production 85 per cent. Railway traffic movement was up 17 per cent, while the gross revenues on the Canadian lines of the C.N.R. increased by about 32 per cent, while C.P.R. gross revenues rose 21 per cent. Employment showed a 7 per cent increase.

---

No. 326 -- Wed. Aug. 21, 1940 -- From German-Canadians

Canada has a population of over eleven million people and nearly half a million of these are of German origin. The following wonderful editorial, therefore, which appeared on July 24 in Der Nordwesten of Winnipeg, will be read with particular interest:

"The registration of all Canadians is a timely and right action on the part of the Dominion Government. Under the dynamic guidance of the newly appointed Minister of War Services, the Hon. James G. Gardiner, the task is likely to be completed with speed and efficiency. While the primary object is not to draft men into military service, it will ascertain in a very thorough manner who is fitted for such and who is not; and it will also reveal what contributions Canadians as individuals can make to the War that Canada, together with the Empire and its other Dominions, is waging against the tyrannical forces of Hitler and Mussolini, now seeking to destroy every shred of liberty and freedom enjoyed by the Free Democracies of the World. This National Registration is compulsory and any evasion is punishable by severe penalty. But even if that were not the case, we believe our people of all races would comply with it readily. In doing this, however, let no one delude himself with the thought that his responsibilities are over. As far as we in this country are concerned, they are only commencing for all of us.

"The views expressed by Der Nordwesten from week to week do not exaggerate the seriousness of the situation that confronts us. We believe our readers understand that, for our attitude has been generally commended.

"It would be much more pleasant if we could say that we are safe on this side of the Atlantic from the terror which is, day and night, sweeping over the British Isles. But we are not -- and though we should escape the physical dangers, what would it profit us, if we were to be subjugated instead?

"We are keenly appreciative of the difficulties that the tragedy forced upon us, brings to loyal German Canadians. Many of them still have close ties of kinship with their Fatherland and the sentiments which arise from that fact are not readily eradicated, nor should they be under less dangerous circumstances. This, however, is the day of stern realism. All those who love Canada must put Canada first, and must act with all the force of which they are capable, remembering that the War is not of Canada's creation, not of Britain's creation, but was conceived and plotted in the Chancelleries of Germany and Italy, with the dominating object of crushing all nations that would not bow the knee to the Dictators' views of civilization. This is the challenge which Britain and her Dominions (with their own absolute power of self-government) accepted. This is the War which, with Canada's help in man power, supplies and undaunted courage, must be won, and will be won if all that is worth living for is not to vanish from this land which we cheerfully accepted as our home.

"As a newspaper now serving its nationality throughout the Dominion over half a century, we feel that there should be no misunderstanding among our people. If there are any newspapers printed in the German language in Canada that are not dealing with the drastic realities of the War and that unequivocally, they are rendering a disservice not only to the country, but to the vast majority of the German people whose loyalty to Canadian Institutions is not now, and never was, in question."

---

No. 327 --- Thurs. Aug. 22, 1940 --- Saving the Larch

Wartime has brought home to us, probably as never before, the value of Canadian woods and the importance of saving the trees from the pests. One of these pests is the larch sawfly.



The larch sawfly is a European insect which was first reported in the United States in 1881. The following year it was found in Canada. It spread rapidly until the infested area coincided with the distribution of eastern larch, commonly known as hackmatack or tamarack. After a few years of repeated defoliation, the mature larch over millions of acres in eastern Canada were almost wiped out. Since the initial outbreaks the younger larch, too, have suffered from periodic outbreaks and recently the insect invaded British Columbia, where it attacked the more valuable western larch.

The destruction to larch is caused by a greyish-green larva, or "worm" which devours the foliage during July and August, giving the trees the appearance of having been swept with fire. At the completion of feeding, the larva drops to the ground to spin its cocoon, from which an adult fly emerges the following spring. The adult, upon emergence, deposits its eggs in slits in the new shoots. After an incubation period of a few days a new generation of larvae issues from the eggs, and the injury by the insect is repeated.

In 1906, the Division of Entomology at Ottawa took steps to check the ravages of this insect. It was discovered that the insect in England was kept under control by a parasitic fly (*Mesoleius tenthredinis* Htg.). This parasite searches out, and lays its egg within the sawfly larvae on the trees. The parasitized larva continues its feeding and makes its cocoon. At this stage the parasite egg develops into a maggot which gradually devours the contents of the cocoon. Instead of a sawfly adult issuing in the spring, a parasite emerges and renews the attack on the destructive sawfly larvae.

Some of the parasites were brought to Canada and small colonies were released in Ontario in 1910 and in Quebec in 1911. The parasite has since checked several infestations in Quebec and has been recovered 265 miles from one of the original liberation points.

In recent years the parasite has been recolonized in other areas in Canada. It has been released in New Brunswick where its establishment has been very rapid.

---

No. 328 -- Fri. Aug. 23, 1940 -- Drilling for Oil

Drilling for oil - vital force of mechanized war - is under way in regions extending from New Brunswick in the east to Alberta and the Mackenzie river in the northwest. In the Peace River district of British Columbia, drilling is expected soon.

Alberta ranks first as producer of oil and gas in the Dominion. The Turner Valley field is responsible for most of the production, with a yield in 1939 of 7,456,000 barrels of petroleum. Turner Valley produces 96 per cent of all petroleum produced in Canada.

In New Brunswick, the Stoney Creek field has been producing oil and gas since 1909. Up to 1939, the field had produced and delivered for consumption 17,500,000,000 cubic feet of gas and produced 240,000 barrels of oil.

After the lapse of a quarter of a century, interest has again been revived in petroleum possibilities of Gaspé peninsula. To test possibilities, a well is now being drilled 30 miles west of the town of Gaspé.



All the commercially productive oil and gas fields so far discovered in Ontario lie south of a line drawn from Sarnia to Hamilton. East of Hamilton, all wells producing gas in commercial quantity lie a few miles south of the Niagara escarpment. Exploratory drilling is in progress on Manitoulin Island.

No oil or gas in commercial quantity has been found in Manitoba, and oil and gas production in Saskatchewan is confined to the district of Lloydminster on the Alberta boundary. Experts however consider that the whole plains region of Saskatchewan is worthy of prospecting for oil and gas.

In Northwest territories, about 50 miles north of Fort Norman on the Mackenzie, two wells are producing oil. Expansion of the field is curtailed by limited local demand, poor transportation facilities and distance from outside markets.

The Provincial government of British Columbia has made arrangements to test certain areas in the Peace River block during the present summer.

---

No. 329 -- Sat. Aug. 24, 1940 -- Farm Woodlots Valuable

Advice to the farmer on how to manage his farm woodlot is contained in a bulletin entitled "Farm Woodlots in Eastern Canada" prepared under the direction of the Associate Committee on Forestry of the National Research Council and published recently by the Committee of the Privy Council on Scientific and Industrial Research, of which the Hon. James A. MacKinnon is chairman.

The bulletin is intended as a help in the rational development and utilization of farm woodlots. In many cases these are capable of supplying a more substantial revenue than is ordinarily realized.

Canada's prosperity depends on its farms. The business of agriculture has from two to three times as much money involved as the next largest basic industry in the country -- that of mining -- and the net value of the agricultural output about equals the total value of products from the next five branches of primary production. As in other lines of activity, however, maximum farm returns are possible only through complete development of all parts making up the whole. More than 16,000,000 acres, or one-third of the total farm land in the five eastern provinces, is woodland.

Farm woodlots should be twice as productive as they now are. Although this increased production might be absorbed by existing markets, it would probably cause new industries requiring special products to spring up in many communities. Farm woodlots occupy an enviable place among possible sources of wood supply because their ideal accessibility ensures their products of a favoured place in the market.

Woodlots should be kept in a condition that will ensure the maximum yearly growth of the right kind of trees. Cutting should be done at the proper time and material sold in the market giving the best returns. Good management involves the same principles every farmer applies in the raising and disposal of his cultivated crops. The bulletin discusses these questions fully and clearly.

Other chapters deal with methods of tree planting, suggestions for the

improvement of existing stands, methods of estimating standing timber on land tracts of a few acres, how to protect the woodlot from fire, wind storms, tree diseases and harmful forest insects, and there is finally a chapter entitled specifications, dimensions and utilization of different products of the woodlot.

No. 330 - Sun. Aug. 25, 1940, --- Canada Second in Gold Production

Of far-reaching importance is Canada's gold production. Gold provides the sinews of war. In the midst of war comes this cheering news from the Dominion Bureau of Statistics:

According to preliminary statistics of world production, Canada probably ranked second as a gold producing country in 1939, being surpassed in output only by the Union of South Africa and possibly Russia; the mine output of recoverable gold in the United States in 1939, and not inclusive of production in the Philippine Islands, was reported by the United States Bureau of Mines, in a preliminary statement, at 4,603,-425 fine ounces; output in the Transvaal during the same period was approximately 12,819,000 fine ounces. Reliable data relating to gold production in Russia are unavailable at present and it has been recently stated that Russian output is somewhere between 4,000,000 and 5,000,000 fine ounces per year.

The estimated average price per ounce of fine gold, expressed in Canadian currency, was \$36.1365 in 1939 compared with \$35.17 in 1938. Practically all new bullion produced in the Dominion from Canadian ores is sold to the Dominion Government through the Royal Canadian Mint at Ottawa or to the Dominion Assay Office at Vancouver. This gold is refined, converted into fine gold bars weighing approximately 400 ounces each, and is usually disposed of in world markets wherever the most advantageous net price can be obtained.

Production of new gold in Canada from all primary sources totalled 5,094,379 fine troy ounces in 1939 compared with 4,725,117 fine troy ounces in 1938. The gross value of output in 1939 amounted to \$184,115,951 or an increase of 10.8 per cent over the corresponding value of the preceding year. Of the total output in 1939, the mines of Ontario contributed 3,086,076 fine ounces; Quebec, 953,377 fine ounces; British Columbia, 626,970 fine ounces and Manitoba, 180,875 fine ounces; lesser quantities were recovered in the Yukon, Saskatchewan, Nova Scotia, the Northwest Territories and Alberta. Production according to type of deposit or nature of recovery included 82.14 per cent in crude gold bullion bars produced at "gold mines"; 2.47 per cent from alluvial deposits; 10.36 per cent in blister or anode copper; 0.63 per cent in base bullion made chiefly from silver-lead ores and 4.40 per cent in copper-nickel matte, ores, slags, etc., exported. The quantity and value of gold produced in Canada during 1939 were the greatest ever recorded in the history of the Canadian mining industry.

Gold mining in Canada is classified into three principal industries - (a) the recovery of gold from the gravels and sands of stream channels or beaches or what is defined as "The Alluvial Gold Mining Industry"; (b) the recovery of lode gold, which is named "The Auriferous Quartz Mining Industry" and in which industry the gold is usually the most important economic constituent of the ores mined and quartz the predominant gangue mineral; (c) gold is often found in various other mineral deposits, more particularly in those of copper, and for this reason the review of Canada's "Copper-Gold-Silver Mining Industry" is included here to complete a more comprehensive survey of the Canadian Gold Mining Industry.



No. 331 -- Mon. Aug. 26, 1940 -- Canada's Gold Area

The great part of the gold of Canada comes from the Canadian Shield, an immense area of precambrian rocks extending from the Labrador Coast westward almost to the mouth of MacKenzie River. The area of the shield is roughly 1,825,000 square miles, almost half of Canada. The deposits of the shield are of two main types, namely, quartz veins, from which most of the gold, up to the present time, has been won, and sulphide deposits which produce a smaller but very considerable proportion. The second great source of gold in Canada has been the Western or Cordilleran section, comprising British Columbia and Yukon Territories; the gold production from this section includes relatively large quantities obtained from alluvial deposits. The third principal area in which gold deposits occur is the Acadian region of Eastern Canada, the metal occurring principally in Nova Scotia where it has been mined since 1862.

The number of Canadian gold mining firms reporting mining operations in 1939 totalled 455 compared with 535 in 1938; 80 in 1929 and 65 in 1923. During the year under review there were 474 properties in operation compared with 550 in 1938; in 1939, 232 mines reported production as against 226 in 1938 and 33 in 1923.

The gross value of output for the entire industry and including the value of all recoverable metals, including gold, silver, etc., totalled \$160,014,172 in 1939 compared with \$143,146,911 in 1938. Of the 1939 total, \$109,737,969 were contributed by mines in Ontario, \$24,665,228 by mines in Quebec, and \$18,539,368 by the gold mines of British Columbia.

Employees in the lode gold mining industry totalled 30,622 compared with 29,647 in 1938 and 5,524 in 1923. Salaries and wages paid increased from a total of \$50,462,092 in 1938 to \$53,206,225 in 1939 and fuel and purchased electricity consumed by the industry during 1939 amounted to \$7,952,580 while the cost of explosives, drill steel and other process supplies used in the same period amounted to \$19,484,870.

Dividends paid during 1939, as computed from actual returns made by the lode gold mining industry, totalled \$42,060,008.

---

No. 332 - Tues. Aug 27, 1940 --- Beds

It has been estimated that the average normal person spends from one-third to one-half of his entire life sleeping. What a woeful waste of time.

Sleep, like many another biological process, is said to be merely a habit. It has been developing over a period of millions of years of evolution, until now we can't seem to do without it. Sir Robert Borden once said to a newspaper correspondent that he only required four hours of sleep a day, during the earlier, hardest working days of his career. Doctors tell us we should sleep eight hours.

The custom of sleeping is as ancient as time, yet beds, as we know them, are of comparatively recent vintage. Originally, a bed consisted of merely a hollowed out place in the earth. With the development of civilization came the inevitable desire for greater comfort. Egyptians were probably the first to sleep in elevated bedsteads. They even had mattresses made from dried rushes



sewn into cloth coverings. The Romans copied their bed styles from the Greeks who had open couches, with mattresses of feathers or wool. In turn the Romans introduced the first real beds into England.

So, in step with the slow progress of mankind have come improvements in sleeping accommodations, and the simple article of furniture we all know of as a bed has emerged. Today the manufacture of beds and mattresses comprises one of Canada's major industries. In 1938 over four and one-half million dollars worth of bedroom furniture was manufactured. By far the largest output was from Ontario and Quebec, with British Columbia next in order, and the three Prairie Provinces trailing.

---

No. 355 -- Wed. Aug. 28, 1940 -- Eiderdown

One of the latest in Canadian industries and about which the average person knows comparatively little or nothing is the commercial production of eiderdown.

Since its inception in 1933, the industry has made steady progress and the quantity of cleaned eiderdown marketed annually has increased five times.

Eiderdown comes from the breast of the eider duck. Therefore it is of utmost importance that these birds be conserved. Bird sanctuaries and strict law measures are being enforced with that end in view. The eider duck is one of the largest of our ducks. The male is a mass of contrasting black and white and delicate tints of green and wine, while the female is coloured in even shades of brown. Their bills are mostly stout with much plumage at the base. The birds build their nests and line them with thick, soft coverings of down from their bodies. The eggs are laid on this fluffy mass and are carefully covered and kept warm when the parent leaves the nest.

It is during the period of incubation of the eggs, usually from the end of May to middle of July, that the down is taken. Great care must be exercised however, so as not to interfere with the final hatching of the eggs, or to cause the duck to abandon the nest. The down taken is gradually replaced by the duck and when the young have left, the remainder is gathered, cleaned of bits of straw and moss and made ready for sale and use.

Eider ducks are not to be found in all parts of Canada. As a matter of fact, they usually confine their haunts to the extreme northerly regions, in the Yukon and at the mouth of the MacKenzie River. There is one record of the bird on Lake Manitoba and reports state it has been seen on the Washington and B.C. coast. Suitable coastal islands on which the birds are accustomed to nest are leased from the Province of Quebec by residents of the Gulf Shore area. The lease is for a period of five years and a permit under the Migratory Birds Convention Act authorizes them to possess and sell eiderdown taken from nests on the leased land.

The establishment of this new industry prevents the waste of a valuable natural resource and puts within reach of the consumer a material that is unsurpassed for lightness, durability and capacity for retaining heat.

---

No. 334 -- Thurs. Aug. 29, 1940 -- The Worm Turned

Probably the ardent fisherman is more intimately acquainted with worms than the average person, but we'll wager even he will be surprised to learn that they are capable of emitting an audible sound, and that they have been credited with possessing a surprising amount of intelligence.

Although most worms look alike to us, experts claim there are about 800 different species, only 90 of which are to be found in North America. The majority live in the soil, preferring land containing considerable organic matter and plenty of moisture. They swallow great quantities of earth and digest the organic matter, churning up the soil and mixing it with half decaying leaves and roots, thus maintaining the fertility of the land and stimulating plant growth.

The anatomy of a worm is interesting and is no doubt considered quite intriguing by many a lover of bugs and grubs. Worms have no teeth, no eyes and no feet. Yet they can eat, are sensitive to light and vibrations, and make pretty fair time, all things considered. Their mouth consists of a simple sucking mechanism with powerful muscles. They crawl by means of the alternate expansion and contraction of the muscular rings encircling their bodies, aided by rows of short, stiff bristles along the sides.

Each earthworm is both male and female and produces eggs. The young emerge from the egg capsules fully formed and mature in about three or four months. They often occur in such large numbers that they make the surface of the ground appear lumpy and uneven.

Besides the "early bird", domestic fowl, toads and moles relish earthworms, and it is not often that steps must be taken to control worms in the garden. However, if it is found that they are affecting the root systems of plants or marring the appearance of the lawn, a sprinkling of lime solution has been found very beneficial.

Thus we see that no matter how many mechanical contrivances man invents, there will always be a place for the common earthworm in the scheme of things.

---

No. 335 -- Fri. Aug. 30, 1940 -- Pale Western Cutworm in 1941

The pale western cutworm outlook for 1941 has recently been appraised officially. The decrease in area infested by this pest in Western Canada culminated in 1940 when there was little crop loss. In many areas, however, there has been a lack of rainfall during a great proportion of the period of activity of the larvae which will probably result in an increase in the numbers of this insect in 1941.

The general area of probable pale western cutworm infestation, therefore, in prospect for 1941 would be enclosed by a line which starts at the junction of the Alberta - Saskatchewan border and the International Boundary and runs northeastward through Hazenmore, Gravelbourg, Avenlea, Francis, Wolseley and Lemberg, turning north and then west just south of the Melville - Nokomis line of the C.N.R. through Nokomis, Dana and Hafford to Mervin, crossing the Alberta- Saskatchewan border a few miles north of Lloydminster. Here it turns southwestward, running through



Kitscoty, Irma, Lougheed, Alliance, Halkirk, Big Valley and Crossfield to Cochrane, southward along the foothills and westward up the Crow's Nest Pass to Cowley and then southeastward south of Cardston and Woolford to meet the International Boundary at Coutts.

Infestations and crop losses of varying intensity may occur anywhere within this area. It is expected that in two portions of this area the infestation will be more general and severe than in the rest. One of these is expected to centre on Indian Head, including probably Abernethy, Balcarres, Qu'Appelle and the area west of Sintaluta. The other, a more extensive area, can be roughly enclosed by a line running eastward from the Alberta - Saskatchewan boundary near Hilda to Portreeve and Lancer, then north and west, crossing the Interprovincial Boundary south of Alsak and continuing through Monitor to Lure and Fleet.

Here the line turns south and west through Morrin and Beiseker to Calgary and southeastward through High River, Nanton and Magrath, straight east from Magrath through New Dayton and then north through Etzikom to Whitla, angling northeastward through Bowell to Hilda. Within these two special areas reasonably severe general infestations may be expected and serious crop losses may occur if the 1941 season is dry.

The pale western cutworm can be controlled only by cultural means. Fields may be kept free from infestation or if known to be infested may be freed of the insects by the cultural practices which result in their starvation.

The eggs of this insect are laid in loose, dusty soil in August and early September and even a slight crust will prevent egg-laying. Therefore, all summer-fallow work should be completed by the end of July and the field left untouched, and any crust formed by showers should be left unbroken until the middle of September. As harvesting operations break the soil crust, stubble land is very apt to be infested, and in an area where pale western cutworms are expected to be present stubble land should be summer-fallowed the following year. If for any reason the crust control cannot be carried out and land is known to be infested due to faulty culture or drift soil carrying eggs to it from an infested field, or other cause, the cutworms in the field can be destroyed by starvation. This is brought about by delaying spring cultivation until weeds (other than stink-weed) and volunteer grain are from one to two inches above the surface of the ground. At this time the whole field should be thoroughly cultivated leaving the soil "black", and seeding should take place only after a delay of ten days from the time the cultivation was completed.

---

No. 336 -- Sat. Aug. 31, 1940 -- How Britain Keeps Down Food Prices

Most of Great Britain's essential foodstuffs and raw materials are now controlled by the Government. The result is that food in Great Britain is cheap and abundant.

Controlled foodstuffs include bacon and ham, butter and cheese, imported eggs, condensed milk, cereals and cereal products, fish and meat, canned fish, livestock, all animal feeding stuffs, oil and fats, potatoes, sugar, tea and dried fruits.

Since the outbreak of war the British Government has become the largest food

importer in the world. Business men who previously dealt in these products are giving their services to the British Government as expert advisers, many of them without remuneration.

The British Government, fully alive to the problems of wartime shipping, lost no time in placing food contracts in the British Dominions and Colonies on the outbreak of war.

The entire West African cocoa crop, for instance, was bought up by the British Government, and wheat was purchased at the lowest price for 300 years.

The whole exportable butter surplus of New Zealand and Australia was bought up, and one full year's crop of West Indian sugar was bought in advance at pre-war prices.

Thanks to the efficiency with which the British Navy protects the world's trade routes, 99 per cent of all the food supplies shipped to Great Britain from other countries have reached these shores safely.

Prices - wholesale, retail and commodity - in practically every country in the world have risen since the outbreak of war. Since the beginning of 1940, however, there has been a new all-round level of stability in Great Britain. Indeed, in March this year, food prices in Great Britain fell 3.5 per cent, compared with February. This shows how successful the British Government has been in keeping down prices.

According to the Parliamentary Secretary to the Ministry of Food, the British Government is spending between £3,000 and £4,000 a week to keep the price of flour at its present level, while £300,000 a week is spent on controlling the price of meat. The control of milk prices costs the Ministry £250,000 a week.

In all, the British Government is spending £1,115,000 a week to keep the price of food within the reach of all sections of the community. The result is that the 2 lb. loaf is sold to the public at 8d., instead of 10½d. - which would be the market price without control. Milk is sold at 7d. a quart, instead of 8d., and meat at 2d. a lb. below what would otherwise be the prevailing price.

The British Government's aim is to protect the poorer classes. It is not enough that there should be plenty, as there is. What the British Government is ensuring is that food shall be obtainable at a price within the reach of all. There are no food queues in Great Britain.

The contracts made by the Ministry of Food cover, for instance, all West Africa's production of oil for conversion into margarine. This, strengthened with A and D vitamins, provides a complete butter substitute at half the cost of butter. Again, 88 per cent of New Zealand's meat supplies are reserved for Great Britain, and the whole of Turkey's output of sultanas, raisins and dried fruit have been bought for British consumption.

In Great Britain itself, the Ministry of Food is operating on a scale far vaster than that known in the last war. Under the existing system the small trader can carry on with his job under Government control. Local food committees - 2,000 of them - have been set up in every small town and borough. They work



under the guidance of a wholesale committee which obtains its supplies from the Government.

Only three articles of food - meat, sugar and butter - are rationed in Great Britain. There are no fewer than 70,000 retailers handling consumers' ration coupons, which are passed on to the wholesalers, who, in turn, hand them to the Ministry of Food. In this way the Ministry secures an equitable distribution of rationed foods to all the population of Great Britain, while in the case of both rationed and unrationed foods prices are kept within the reach of all.

In the meantime large surpluses of sugar, butter, oils, tea, meat, and tinned foods are accumulating in Great Britain, where they are stored all over the country. Thus, though war conditions may entail some delays, the British public is assured of plentiful supplies of its staple foods at fair prices.

---







STATISTICS CANADA LIBRARY  
BIBLIOTHÈQUE STATISTIQUE CANADA



1010690937