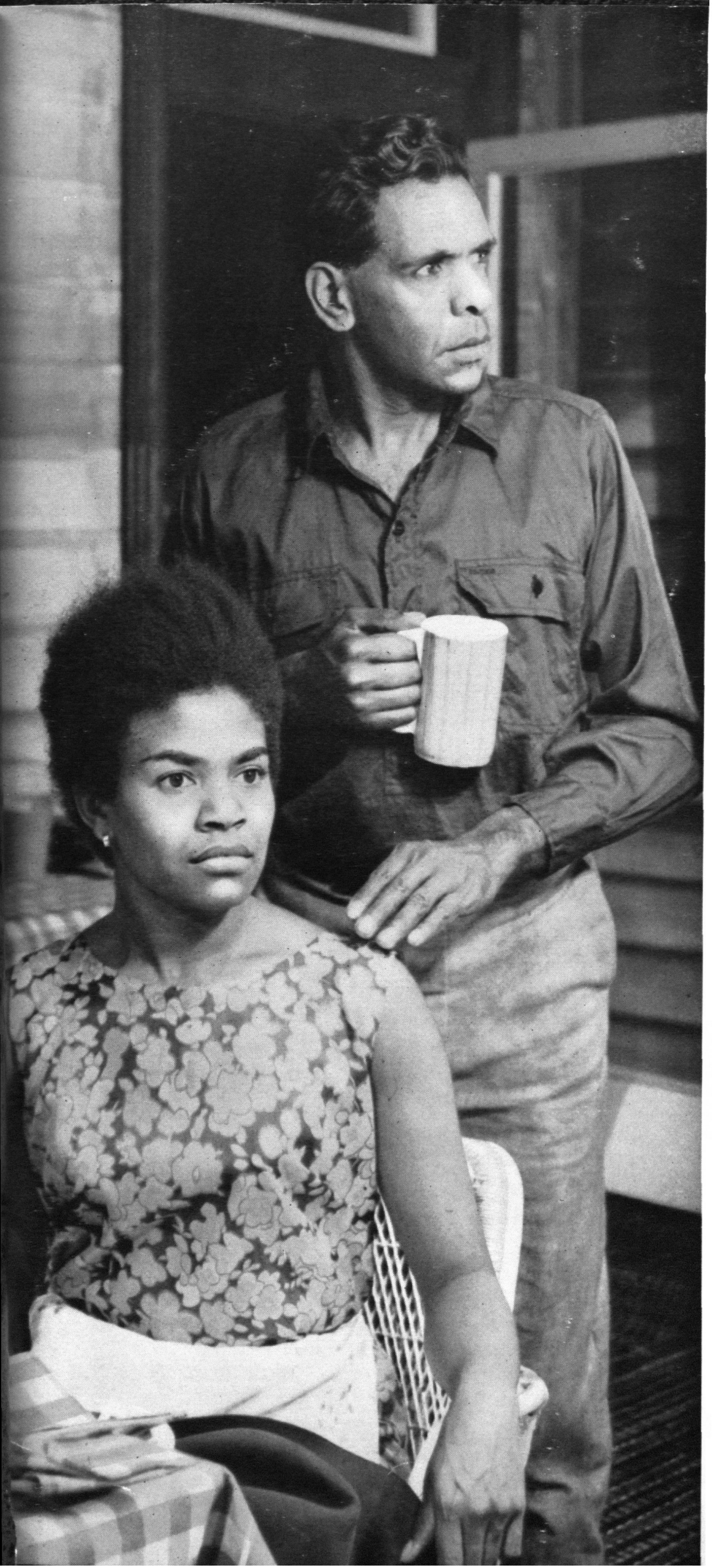

DAWN

JUNE 1966

A MAGAZINE FOR THE ABORIGINAL PEOPLE OF N.S.W.

Registered at the G.P.O. Sydney

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VOLUME 15 NUMBER 6

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PRODUCED BY THE
N.S.W. ABORIGINES WELFARE BOARD

In This Issue

Our Cover

Steve played the role of a stockman in the dramatic "Desire of the Moth"—his most recent success. With him is Patsy Kruger (see story page 1).

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Steve Dodd (left) in a dramatic scene from "Desire of the Moth". With him are (right to left) Ed Devereaux, Googie Withers and Patsy Kruger.

STEVE DODD, ACTOR

The demanding role of Aboriginal stockman in J. C. Williamson's production of "Desire of the Moth" was a hard one to fill—until they thought of Steve Dodd. Steve played his prominent supporting role with great success, and proved that he is one of the very few talented Aboriginal actors in Australia.

"Desire of the Moth", a drama set in an outback sheep station of New South Wales, starred Ed Devereaux and Googie Withers. Patsy Kruger played a strong supporting role. It played to audiences in Melbourne for six weeks, and in Sydney for five weeks.

Ed Devereaux, who has a wealth of local and overseas show-business experience, gave valued advice to Steve about such things as stagecraft and delivery.

Steve's performance in "The Moth" has added to his stature as an actor, and, with his current contract with the Australian Broadcasting Commission, for the first time in his life his future as a full-time actor seems as secure as an actor's can be.

Ever since he was a child Steve has loved acting. Now, after almost 20 years in and out of show-biz., he's still in love with the stage. When he talks about acting his eyes flash.

He is a full-blood Aborigine and was born in Alice Springs. As a youth he worked as a stockman on cattle stations, as a horse-breaker, and as a rodeo rider; for many years he was a member of the Rough Riders' Association.

Steve's first film role was in "The Overlanders". As a stand-in he was noticed by the star of the movie—Chips Rafferty—who gave him a small part.

After droving for a time, he worked on the set and had small parts in other Australian-made movies—"Bitter Springs" and "Kangaroo". The company filming "Robbery Under Arms" took Steve to Britain and America for six months, where he gained further valuable experience.

In Australia, as in most parts of the world, the life of an actor is a hard one, and Steve had to rely for his income on many different jobs between his acting engagements. He sang and played the guitar (as he still does)—mainly country and western, and folk music—and rode at rodeos in many States. All this experience has been of considerable value to Steve, who, like most actors, likes meeting people; studying people is an essential part of life for an actor.

Steve has travelled to several countries. He has been to Britain and America (with the film company, above); to Korea, with the Army (in which he served for six years); and to Canada.

He was invited to Canada in 1964 to the world-famous Calgary Stampede—where he gave exhibitions of roughriding. During this overseas trip he spent three weeks at the New York World Fair.

Australian television is not unfamiliar to Steve, who has appeared on several programmes screened here and distributed overseas. In Melbourne he worked for Channel 7 on a serialized historical programme of the early days of Cobb and Co.—Australia's first stage coach-transport line.

In the past 12 months, under his current A.B.C. contract, Steve has played in three documentaries about Australia to be screened overseas.

His movements overseas and around Australia have left him little time to alter his standing as a bachelor—nor would this be a good thing for his profession, which poses many additional problems for married people. But he might soon settle in Sydney.

Producers and casting agencies are impressed by Steve's record of reliability; he is always on time for a performance or a rehearsal; and he works hard.

Hard work, experience, and talent put him in a position to turn in a good performance when acting jobs are offered (and these jobs are increasing); you'll be seeing more of Steve Dodd, actor.

KEEP FIT WITH FOOD

The *Daily Food Guide* shown here (issued by the Commonwealth Department of Health) will help you to select the foods which together provide all the *essential nutrients* for *good health.*

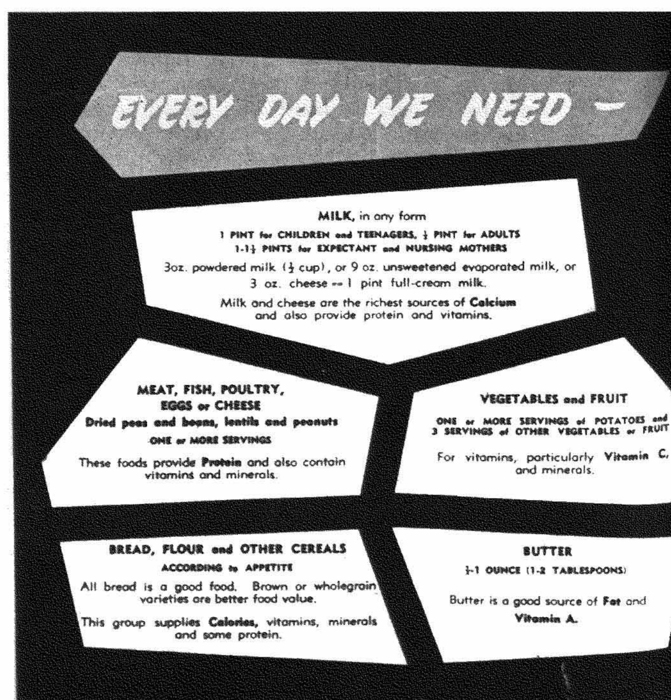
PROTEIN—is for growth and repair of all body tissues. There is protein in meat, fish, eggs, cheese, milk, nuts, dried peas and beans, and in bread and other cereal foods.

MINERALS—*Calcium* is for building bones and teeth and for nerves and muscles. Milk and cheese are the richest sources of calcium. *Iron* is needed for healthy blood. Good sources of iron are liver, kidney, red meat, eggs, leafy green vegetables, and wholegrain cereals. The five food groups supply all the minerals needed for health and growth.

VITAMINS—are essential for the maintenance and growth of body tissues. All vegetables and fruit (fresh, canned or frozen) provide some *vitamin C.* The best sources of this are oranges, grape-fruit, lemons, papaw, rockmelon, pineapple, berry fruits, tomatoes and potatoes. Good sources of *vitamin A* are butter, and carrots and leafy green vegetables. All the necessary vitamins are supplied by meals based on the five food groups.

CALORIES—supply energy for work and play, and maintain body temperature. All foods provide some calories.

WATER—is needed for every chemical process in the body. Solid foods as well as beverages provide water.



YOUR CAREER - CARPENTRY AND JOINERY

This information about carpentry and joinery has been extracted from the booklet "Background to Careers", published by the Vocational Guidance Bureau of the Department of Labour and Industry.

The work of the carpenter and joiner is usually in the construction and maintenance of buildings and civil engineering projects, the carpenter being responsible for the actual timber construction in the building and the joiner for the fittings that are used inside it. In the erection of a house the carpenter constructs the wooden frames into which the concrete foundation is poured, erects the wooden framework for the whole structure, pitches the roof and lays the floor. It is he who sets in place the window frames and sashes, erects stairs and builds cupboards and shelves. The carpenter does most of his work at the building site. The joiner, on the other hand, works mainly indoors, making the frames, sashes, doors, panelling, etc., which the carpenter erects.

ENTRY, TRAINING AND PERSONAL REQUIREMENTS

The apprentice's training usually covers both carpentry and joinery, but the tradesman generally tends to specialize in a particular section of either of these branches.

Entry to the trade is through a five-year apprenticeship, either trainee or indentured. A boy who has reached the Intermediate or School Certificate standard will generally find employment more easily and will be better able to deal with problems in practical work and technical college studies. A sound knowledge of mathematics, better than average mental ability and an interest in woodworking are to the advantage of the prospective apprentice.

The trade course is of four years, covering theory and practice of carpentry and joinery, trade drawing and calculations, trade geometry, building construction, theory and drawing. A correspondence course is available for lads unable to attend oral classes.

PROSPECTS

Promotion to jobs such as foreman, clerk of works and building inspector, is available to the tradesman who is prepared to undertake further technical college studies. Others may aim to eventually establish themselves as building contractors.

WAGES

An indentured apprentice serving a five-year term of apprenticeship would generally commence at about $10 to $14 a week, increasing to $34 to $36 a week in the fifth year. Rates for trainee apprentices are slightly higher.

Minimum rates for journeymen (men who have completed their apprenticeships and work for an employer) are about $40 to $44. In practice, well above award wages are paid to competent men.

For latest award rates for apprentices and journeymen, contact the Award Enquiries Section, Department of Labour and Industry, 53 Martin Place, Sydney. Phone 20516, extn. 2868.

Further information Master Builders' Association of New South Wales and the Vocational Guidance Bureau's leaflet *Carpentry and Joinery*.

FIXING BROKEN WINDOWS IS EASY

Putting in a new pane of glass to replace a cracked or broken window is not a hard job—it's just simple home maintenance.

Although it is more convenient to remove the window sash and work on it in a workshop, this is not essential because the job can be done quite well without removing the sash.

Whatever the type of window (box-frame, casement, or metal frame) the re-glazing procedure is similar. Before starting the job, place sacking or bags underneath the window to catch broken fragments of glass and other waste.

First, push out the glass—but be sure to wear gloves to protect your hands. Odd fragments of glass remaining at the edges of the window frame can be tapped out with a hammer, but watch out for flying splinters of glass.

Next, remove all the old putty and sprigs (special pieces of metal used to secure the glass before putty is applied) with a pair of pincers. Old hardened putty can be removed by using an old knife and a hammer (in much the same way as a chisel is used).

The rebates (slots in which the glass is fitted) should be cleaned of old putty as thoroughly as possible, right down to the bare wood; but don't let the knife cut into the main woodwork of the sash frame, because this causes splitting.

When the rebates have been cleaned, sweep them out with a dusting brush, and seal the bare wood with a coat of priming paint or shellac knotting. This stops the wood absorbing raw linseed oil in the putty, which otherwise would allow the putty to dry out too quickly and the glass pane might fall out.

Measure inside the rebates to get the size of the new pane of glass. Reduce these actual measurements (made with a steel or wooden rule—not a tape measure) by ⅛ in so that the glass pane will have enough clearance.

Window glass is sold by weight, according to the number of ounces per square foot; 24 oz is the usual weight for window glass. If you're not sure of the type of glass to buy, take a piece of the old glass as a sample when you order the new glass.

As well as the glass, you will need special glazing putty, and some sprigs (those little metal pins). Before you fix the new glass into the sash frame it is a good idea to slightly round off the corners with a pair of pliers. This helps prevent the glass splitting from corner to corner when it is pressed into place in the sash.

Throughout the job keep the glass dry and free from oil and grease. The consistency of the putty used is important too. For good results it should knead in the hand freely without being sticky or too dry. For sticky putty, add a little whiting (normally used for whitewashing); dry putty can be made more pliable by adding raw linseed oil.

The next part of the job is to press a small amount of putty into the rebate—where the pane of glass will be placed. The putty forms a cushion for the glass, which is pushed with the fingers until the putty is flat underneath.

Now that the glass is in position it has to be kept that way, and this is why the sprigs are used. The retaining sprigs are hammered gently into the frame. Use a very light tack hammer, or the side of a stout chisel. The sprigs should project on to the glass about ¼ in; they should be placed at intervals of six inches around the frame on both sides, and not in line, or exactly opposite sprigs on the other side of the frame (otherwise splitting might occur in the frame).

After the sprigs are in place putty is pushed with the thumb to make a bevel where the glass meets the wood of the frame. This bevel is finished off smooth by using a putty knife.

The final part of the job is to trim surplus putty squashed out from the cushion where the glass pane sits in the frame.

Leave the new putty for at least 10 to 14 days to harden. After this it can be finished by painting in the usual way, by first applying a priming coat, then an undercoat, and finally the finishing paint.

The first time you put in a new pane of glass may be a little difficult, but only a little practice is needed to produce a neat, professional job.

T.V. BRINGS NEW LIFE TO TABULAM

Television came to Australia ten years ago, but not till March this year did the Aboriginal people of Tabulam begin to sample its magic. In the past few months it has created new interest in life in many of the older people, and provides wonderful entertainment for children and adults alike.

A 25-inch T.V. set was purchased by the Tabulam Aboriginal Station Social Club, and installed in the Station's community hall. Mr Seymour, welfare officer at Tabulam, asked Mr Bert Walker, Station council president, to arrange for residents to:

- set a time limit on children's viewing (to prevent interference with schoolwork and sleep);
- place a responsible person in charge of the set at each viewing (to prevent mishandling by children); and
- obtain voluntary workers to keep the hall clean.

All these requests have been complied with by the people of the Station. The hall is always clean and tidy, and children are not allowed into the hall after 8 p.m. in the evenings preceding school days unless accompanied by a parent.

Mrs E. Seymour, matron at Tabulam, said that some of the older residents had taken a lively interest in T.V., and particularly liked the way news was explained in the T.V. newsreel form. Several old-age pensioners, who had seldom left their homes in years, now walked to the hall in the evenings to watch television.

One old man watches everything from cartoons to newsreels, then goes home and describes in detail what he has seen to members of his household. Before the television set arrived, this man could not find entertainment and used to spend most of his time just sitting about the Station; he doesn't read or write, and till a few months ago had never seen a movie picture.

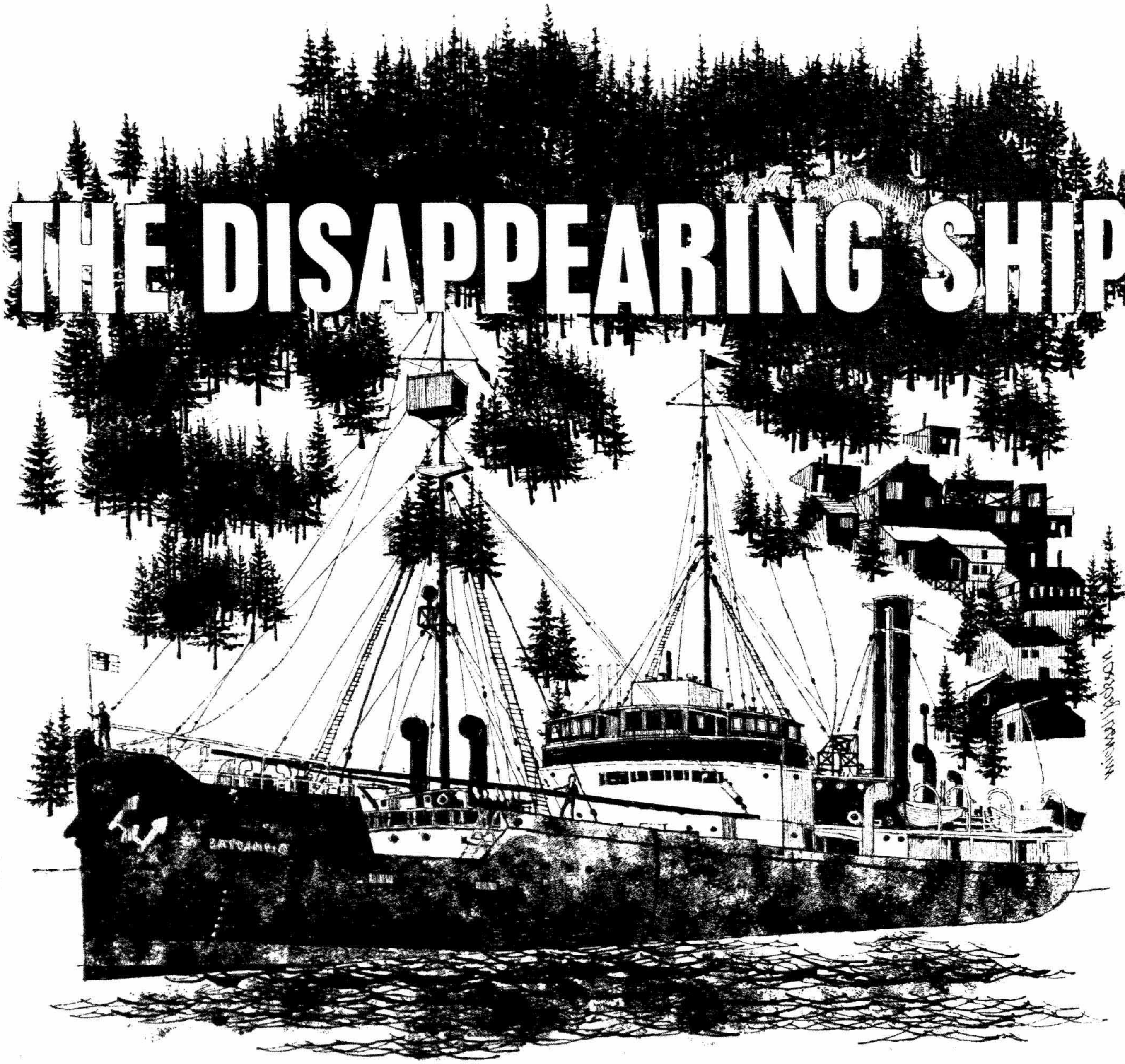
Mrs Kate Robinson, speaking about the T.V. set, said "It's the best thing that ever happened to the people on this Station". And you can be sure that the old man agrees with her.

PEN-FRIENDS WANTED

Christine Anne Frankham, of Richmond Main Colliery, Kurri Kurri (near Newcastle), would like to write to a pen-friend. She will be 11 years old on 26 July, and learns tap and ballet dancing, and the piano.

Michael McDougall (see picture), c/o W. Dootson, Private Mail Bag, Woolgoolga, N.S.W., would like to correspond with a girl about 16 years of age. Michael is 18, and plays the guitar in the Rambling Sea Foam dance band.

THE DISAPPEARING SHIP



By David Gunston
(Reproduced by kind permission of "British Petroleum Shield Magazine")

Most of the sea's many fascinating mysteries end with the discovery or loss of the ship concerned. But one of the strangest sea stories of all time is still unfinished—and looks like remaining so for a long time, perhaps forever. This is the unique case of the *Baychimo*, the deserted ghost ship that refuses to die and still haunts human memory and curiosity.

A fine, trim, solid steel cargo steamer of 1,300 tons owned by the Hudson's Bay Company and originally used by them to collect furs from Eskimo trappers along the Victoria Land coast on the North-West Territory of Canada, the *Baychimo*, with her single tall funnel, curved bridge, and long high prow, was sturdily built to withstand the floes and pack-ice of the dangerous northern waters in which she operated.

She actually pioneered fur trading with the Eskimo settlements around the Beaufort Sea, forging her way many times on her 2,000-mile round trip through some of the most treacherous sea-lanes in the world. Each year she set out on a regular voyage, always a tough and difficult one, delivering food, fuel and other supplies to and loading pelts from eight of the Hudson's Bay Company's lonely outposts.

On 6th July, 1931, she left Vancouver, British Columbia, on such a trip, with Skipper John Cornwell and his crew of 36. They expected a hard trip, for all their runs were hard. What they did not know was that this one was to be the *Baychimo's* last manned voyage.

Day and night, under the misty glow of the never-setting sun, the *Baychimo* steamed on eastward. At each port of call her crew laboured long and hard unloading supplies and loading up valuable furs. Eventually they reached the end of their normal eastward run by the shores of Victoria Land. With the hold crammed with valuable cargo, the *Baychimo* was then turned about for Vancouver by a much relieved captain.

Unfortunately, that year winter came early to this northern wasteland. Ferocious winds and the deep-freezing conditions brought the dreaded pack-ice south much quicker than usual. By 30th September only a little open water remained for the ship to steam through, and on 1st October the ice closed in and sealed the *Baychimo*.

Her engines at stop, she could move only as the creaking, numbing ice willed. She was not far from the Alaskan village of Barrow, where the company had permanent huts built ashore. Seeing that a terrible blizzard was imminent, Cornwell ordered his men to trudge across the half-mile or so of ice to shelter in these huts, and for two days they lived inside them, half frozen and unable to venture out.

Then the first extraordinary thing in the *Baychimo's* strange story happened. Without warning the pack-ice loosened and moved away from the vessel's sides leaving her movable again. The crew rushed aboard and for three solid hours the ship steamed away to the west at full speed. Disaster seemed narrowly to have been averted.

But once more the ice gripped the little cargo steamer. This time it did not let go, and on 8th October a sickening crack heralded the sudden appearance of a deadly black fault line in the ice. It actually cracked right across the pitch where some of the crew were playing football, while waiting for the chance to move southwards and home once more.

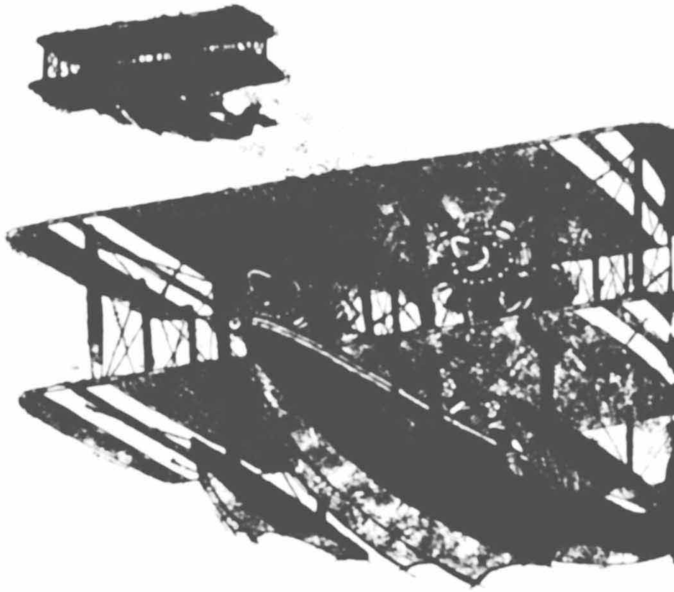
Now the ice that held the ship had broken away it began to move slowly but surely towards the shore. To Cornwell it seemed only a matter of hours before his rugged little vessel would be crushed like an empty egg-shell. Radio S O S messages were sent out, but these doughty men hung on in the hope that they and their ship might be saved. By 15th October their position seemed so desperate that the Hudson's Bay Company sent two aircraft from the base at Nome, 600 miles away. These rescued 22 men of the *Baychimo's* crew, leaving her skipper and men behind to await the time when the melting ice would release their ship and its precious cargo. They knew they might have to wait as long as a year, so about a mile from the shore they built a small shelter on the pack-ice.

Their sojourn proved to be short and startling. For on the pitch-black night of the 24th November a hellish blizzard descended on the area trapping the men inside their wooden shelter. When at last the storm abated, they emerged into the wintry gloom to find that the *Baychimo* had completely vanished beneath mountains of grotesque ice 70 feet high. They searched around and about as much as they could, but failing to find their doomed ship, came to the not unnatural conclusion that she had been broken to pieces in the blizzard and had sunk.

They reached the safety of the mainland and prepared to return home before the worst winter weather set in. In a few days, however, an Eskimo seal-hunter brought the astonishing news that he had seen their ship some 45 miles away to the south-west. Already, the *Baychimo* had willy-nilly been turned by the inexorable forces of nature into a ghost ship. The fifteen huddled men trudged to where the Eskimo led them, and as he had foretold, there was their ship.

It was now obvious to Captain Cornwell that the chances of salvaging his vessel were nil. The ice simply was not going to let him. So they rescued the more valuable furs from the hold, and with reluctant astonishment left the *Baychimo* for ever. In due course they were flown back home, thankful to be alive.

As the months went on the company's base in Vancouver received strange reports from Eskimo sources that their long-lost ship had again been sighted, this time several hundred miles away to the east. But man was soon to establish contact with her again. On 12th March, 1932, a young



The Hudson's Bay Company sent two aircraft

trapper named Leslie Melvin discovered her when he made a journey from Herschel Island to Nome by dog-team. She was floating inshore peacefully enough. He managed to board her and found that many of the furs were still intact in her hold. Unfortunately, as he was alone and without much equipment many hundreds of miles away from his base in Alaska, he could do nothing.

Some months went by and a group of wandering prospectors saw her and also managed to get on board, reporting everything in perfect order. In March 1933, the *Baychimo* apparently drifted back roughly to where her captain had abandoned her, floating idly in the freezing waters. A body of some thirty Eskimos now reached her by their kayaks, but no sooner had they clambered aboard than another terrific storm blew up. Those petrified Eskimos were to be trapped on the ghost ship without food for ten days before they could get away.

By August 1933, the Hudson's Bay Company knew that the *Baychimo* was now moving calmly in a northerly direction, but she was still much too far away from civilization to make salvage operations a possibility. The *Baychimo's* next visitors were an exploring party on a schooner, among whom was Miss Isobel Hutchinson, a Scottish botanist. That was in July 1934, and they boarded her for a few hours.

By now the legend of the little grey tall-funnelled ghost ship was well-known among the Arctic Eskimos, many of them spotting her from time to time on their nomadic travels. By September 1935, she had reached the Alaskan coast. Always she managed to evade the crushing grip of the pack-ice, always surviving the worst polar storms. Nature seemed unable to destroy her, but man was equally unable to rescue her.

One man, however, was intent upon salvaging the wandering ship. He was Captain Hugh Polson, who, in November 1939, spotted her from his ship from a considerable distance. He managed to board her successfully and temporarily took over the ghost craft, but in the end was prevented from salvaging her by the creeping ice-floes.

Since 1939 the *Baychimo* has been seen several scores of times, mostly by Eskimos, but occasionally by white explorers, traders, and fliers. Each time she has eluded whatever pursuit was possible, and over the past 31 years she has sailed, crewless and alone, many thousands of ice-girt miles.

In March 1962, a small party of Eskimos discovered her again while fishing from their kayaks. This time she was floating serenely off a desolate strip of coast-line on the Beaufort Sea. Once again, there was no means of capturing her, so they left her to drift away into the unknown once more. Doubtless to salvage this probably by now empty and rusting ship is still no more a possibility than it was 30 years ago.

So, it seems likely, the *Baychimo* will sail on, a fabulous grey hulk that refuses to enter the limbo of lost ships yet also to return to the control of man. Perhaps hers will always be the strangest sea story of all.

A small party of Eskimos discovered her again

MODERN MOTOR MAINTENANCE FUEL SYSTEM FAULTS

THIS IS THE FIFTH IN A SERIES OF ARTICLES ON MOTOR MAINTENANCE, REPRODUCED BY KIND PERMISSION OF MODERN MOTOR MAGAZINE.

Although it is a car's lifeline, the conventional fuel system is remarkably trouble-free and durable. In most cases it requires no periodic maintenance and seldom needs to be given a thought.

A conventional fuel system, of course, consists of a tank, a pump (either mechanically or electrically operated), carburettor and pipes to deliver fuel from the tank to the carburettor. There is also a gauge to indicate fuel level in the tank.

Of the troubles associated with fuel systems, blockages are the most common. Generally blockages are caused by foreign matter (such as sand) entering the tank. Another cause may be that scaly deposits of rust have formed and been dislodged inside the tank or pipes.

And where a length of rubber tube is used as a line it is important the correct type of material be fitted; if not, the fuel may attack and rot it with particles flaking off to block the system.

Blockages are usually easy to trace and eliminate. The pipes should first be inspected for kinks or sharp bends. These could restrict the fuel flow and may be caused by incorrect installation of the pipe or damage from a flying stone. If severely kinked it should be renewed because it could fracture after being straightened.

Should the pipes be undamaged, the restriction is obviously internal. There is little difficulty in diagnosing in which area the trouble lies. The system is simply traced back from the carburettor to the tank. For example, if fuel is being delivered to the carburettor but is not reaching the engine, the blockage must be in the carburettor. Should fuel not be reaching the carburettor, the feed pipe from the pump is suspect. If that checks out okay, then the next thing to do is examine the pump, tank-to-pump pipe, and the tank.

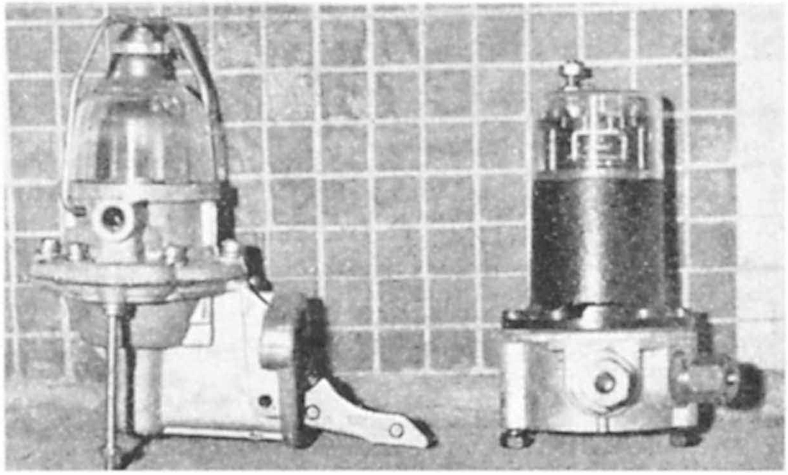
If the tank appears to be the source of trouble, the pipe should be removed at the outlet, then a blast of air should be put into the tank through the outlet union. Inability or difficulty in blowing into the tank clearly indicates a blockage.

Usually the tank will have to be removed from the car for thorough cleaning if foreign matter is present. Sand and similar substances can be removed by flushing repeatedly with water until the tank is clean. Of course, all traces of water must then also be eliminated and the tank dried before it is replaced.

Where the blockage is caused by corroded metal it is best to renew the tank.

Blocked fuel pipes may be cleaned by poking wire through them or by blowing them out with

Typical mechanical fuel pump's insides, showing gaskets, etc. Dirty filter often causes trouble



Both mechanical (left) and electrical pumps follow same principle, have different actuation

compressed air. As before, if corrosion is evident the pipes should be renewed.

CHECKING THE PUMP

Blockages in the fuel pump and carburettor can usually be simply remedied by dismantling and cleaning the components. It should be borne in mind, however, that if the blockage occurs persistently it is probably the result of accumulation of foreign matter in the tank or pipes, so they should be cleaned as the source of the trouble.

Some fuel pumps have filters or strainers to prevent foreign matter reaching the carburettor. Failure to service the filter regularly may allow it to choke and block the system. Trouble is cured by cleaning or replacing the element.

Although not creating a blockage in the strict sense of the word, foreign matter can cause pump malfunction by impeding operation of the one-way valves. Deposits which lodge in the valves may prevent them from closing properly and so disrupt the pumping action. In this case the carburettor could be starved for fuel, as it may also be if there are leaks in the system.

tions involves nothing more than tightening the connection (unless it is damaged), but faulty components must be repaired or replaced.

Most modern cars incorporate a breather in the petrol tank and use a sealing filler-cap, but many older models simply have a small hole in the cap to serve as a breather. If the hole becomes blocked and the tank cannot breathe, one of two things can happen—either the pump is not powerful enough to draw the fuel because of the vacuum created in the non-breathing tank; or the pump is sufficiently powerful to draw fuel and the resultant vacuum causes the tank to collapse.

On some of the older-model cars with electric fuel pumps mounted externally at the back of the car, it is worth while making sure that there has been no stone damage as can happen on dirt roads. On some cars it was possible for the pump housing to fill up with water after passing through floods. And because there was no drain hole, the pump would eventually corrode into failure.

PUMP TYPES

The fuel pump may be electrical or mechanical. Both function in a similar manner although it is accomplished by different means. The actual while the other end contains two one-way valves, each operating in opposition to the other.

One valve is located in a port connected to the pipe from the fuel tank (and is the inlet valve), whereas the other is in a port connected to the pipe to the carburettor (and is the outlet valve). When the diaphragm is actuated so it flexes away from the valves, capacity of the chamber is increased and a partial vacuum is created. Atmospheric pressure in the tank forces fuel along the pipe, through the inlet valve and into the chamber.

The diaphragm then flexes in the opposite direction, towards the valves, and reduces the chamber capacity. The inlet valve closes and the outlet opens, allowing excess fuel in the chamber to be delivered to the carburettor's float bowl. The cycle is continuous so long as the diaphragm is flexed, but to prevent excess fuel entering the float chamber there is another valve, operated by the float, in the carburettor inlet.

When the float chamber is full, the valve is closed and the carburettor cannot accept more fuel until the engine uses a predetermined amount. At that stage the fuel level (and float) in the chamber has dropped, opening the valve and allowing more fuel to be admitted. As the chamber fills again, so the valve closes.

Typical electrical pumps have the diaphragm actuated by a rod, or plunger, which is moved in one direction by an electromagnet and returned by a spring. Typical mechanical pumps also have the diaphragm attached to a rod, but in this instance the rod is moved by a rocker arm which bears on and is operated by the camshaft. Both the rod and rocker are returned by springs. Mechanical pumps are built in single- and double-acting models. Single-acting units are designed only to pump fuel, but double-acting types pump fuel and create a constant vacuum, usually for operation of the windscreen wiper and/or brake booster.

Where a single-acting pump is fitted to an engine, the line from the vacuum-wiper motor runs directly to the inlet manifold, sometimes via a reserve tank. The failing of this system is that the manifold vacuum varies considerably according to throttle opening and engine load. This can cause the wipers to slow, or even stop, when the car is climbing a hill accelerating hard.

A double-acting pump is virtually two single-acting units combined, one pumping fuel and the other maintaining vacuum.

Should the fuel-pump diaphragm leak, pumping efficiency will naturally suffer until the point where no fuel is delivered. A leaking vacuum-pump diaphragm will upset operation of the windscreen wipers and may promote excessive oil consumption. Oil may be sucked from the sump, through the diaphragm to the inlet manifold and then enter the combustion chambers with the fuel-air mixture.

Most fuel pumps are serviceable and can be repaired if a component becomes worn or faulty. Spare parts and overhaul kits are available for that purpose. It is seldom difficult to trace the most common reasons for fuel pump troubles—faulty diaphragm, worn rocker arm, burnt contact points, lack of electrical current or defective valves. Not so easy for home mechanics to diagnose, though, are malfunctions that permit the pump to operate but not at its correct efficiency.

VOLUME AND PRESSURE

The volume of fuel delivered by the pump can be checked relatively easily if insufficient or excessive volume is thought to be responsible for some problem. After ascertaining from a specialist or a workshop manual what volume should be delivered in such and such a time (say a pint in 45 seconds), the delivery pipe is removed from the carburettor and held over a graduated container. The ignition system is then disconnected and the engine cranked by the starter motor.

Fuel should flow from the pipe in sufficient volume to record one pint in 45 seconds, or whatever the specified volume/time may be. If more or less time is required, a fault exists.

The pump should also deliver fuel at a specified pressure, usually between one and six pounds per square inch, according to requirements. If a suitable gauge is not available the pressure should be checked by a specialist. Insufficient pressure leads to fuel starvation and associated problems, such as hard starting. Excessive pressure is equally troublesome, for it contributes to hard starting and other maladies including heavy fuel consumption.

Should the fuel pressure be suspect, it is wise to also inspect the carburettor float-chamber valve—the valve which, controlled by the float, admits or prevents fuel reaching the float chamber. A defective valve may restrict the entry of fuel or, on the other hand, may admit it too freely. At the same time ensure the float level is correct and that the float is in good condition and operating smoothly.

SOME HINTS ON BUYING A SECOND-HAND CAR

Next to a home the most important investment made by the average family is in a motor car. Many aspiring car owners go to the second-hand car market, where it pays to be careful.

The buyer has a distinct advantage initially over any salesman. The salesman is anxious to make a sale whereas the buyer must satisfy himself that the vehicle he is thinking of purchasing is the best available at the price he is prepared to pay.

Second-hand traders sometimes advertise their cars beyond their market value so that they have an advantage in the event of a trade-in. This allows them a profit margin even if they over-value a trade-in.

A buyer should ask for and expect an adjustment to the price if he does not have a vehicle to trade-in.

In most cases salesmen reflect the policy of their company. If their sales approach is one of consideration and genuine interest, if the vehicle in question has been checked by a repair workshop, or if there is no objection to having it submitted for a proper inspection, then a prospective buyer can be fairly sure he is dealing with a reputable firm.

Where a salesman exerts undue pressure or makes extravagant promises he may be employed by a firm with doubtful business ethics.

When buying a vehicle on hire-purchase read the contract before signing it. There is, for instance, one clause in most hire-purchase contracts that specifically waives all guarantees and warranties where the vehicle is second-hand.

This, in effect, could overrule anything promised or implied by a second-hand dealer or his representative.

It is a good idea to join an automobile association (say, National Roads and Motorists Association) and arrange to have the vehicle inspected. Failing this it should be inspected by an independent and qualified automotive engineer.

Any dealer objecting to having a vehicle inspected should be treated with caution.

When purchasing a second-hand car it is advisable to buy from well-established motor traders. These companies wish to maintain a reputation for honest trading and, generally speaking, a second-hand buyer will obtain a better deal from one of these companies.

New car distributors handle a wide variety of vehicles which have been traded-in on new cars. Their policy generally is to retain the best of these for resale.

Selling a car by advertising it for private sale is usually adopted by a person who intends to buy a new vehicle and cannot get the figure he requires for the trade-in. Such sellers generally are interested in a cash deal only.

Be careful if buying in this way. The advertisers usually have no registered business, no workshops and cannot give after-sales service.

Beware of speedometer readings. Because prospective buyers show sales resistance to high-mileage cars, genuine mileages are not shown in many cases.

Finally, having chosen a car which you believe is good value at the price, and in good mechanical condition, consider any hire-purchase commitment. A cash deal is the cheapest method of purchase.

If the car has to be bought on terms, bear in mind that the interest rate on second-hand cars is higher than for a new car, and comprehensive insurance is more expensive also when the car is under hire-purchase.

From *Good Neighbour*.

That Burning Question

The continual seeking for warmth during winter often introduces a health hazard which we tend to overlook.

Always make sure that you're never without a screen around an open fire. Dancing flames, with their almost hypnotic effect on young children, should be imprisoned away from questing young hands—a stumble, and a young face and body could be scarred for life.

Children under seven years of age should never be left in a room where there is an unprotected fire of any kind. Make sure the fire screen is large enough to cover the opening completely.

INFLAMMABLE MATERIALS

Mothers should always remember that *flannelette* is inflammable and its use for children's garments is unwise. Danger will be minimized by using flannel or other woollen materials. Adults should also bear in mind that many dress and suit lengths today are made from combustible synthetic materials, and care should be taken not to stand too close to open fires and radiators. Pyjamas are safer than nightgowns.

REMEMBER

● Pouring kerosene on a fire is a dangerous practice. If petrol is used by mistake, the result is likely to be disastrous.

● Clothes should never be cleaned with petrol in a room where there is an open fire.

● Celluloid articles (such as some baby toys) are extremely inflammable.

TREATING BURNS

● Don't touch the burn more than is necessary, and when you do, make sure your hands are clean.

● Don't apply lotions of any kind.

● Don't remove the burnt clothing or break burn blisters.

● Bandage firmly except when blisters appear or are expected, in which case bandage lightly.

● Cover the area, including the burnt clothing, with a clean dry dressing.

● For severe burns, and where medical aid is delayed for some hours, give the patient drinks of water to which salt has been added; add a teaspoonful each of salt and bicarbonate of soda to a glass of water.

● For face burns, cut from a piece of clean linen a dressing in the shape of a mask, with a hole for breathing. The mask can be kept in position by bandaging as for a fractured jaw.

● Always remember that a burn or scald if extensive should be regarded as serious, and a doctor called at once.

Contributed by the Department of Public Health.

Smoke Signals

TIP FOR THE MONTH Keep wire doors and window screens in good order by coating them occasionally with clear varnish or lacquer.

● W. R. Carpenter Holdings Ltd, one of Australia's largest island trading groups, has selected 12 young men from Papua and New Guinea to be trained for executive positions in the company. Some of the young men, in their late teens, are studying agricultural subjects; other students are studying commerce, and mechanical engineering. In addition to free full-time education, the cadets will get a spending allowance, free board and free text books.

● Football referees have to keep away from the ball and dodge players, and rarely do they have to dodge boomerangs wielded by irate Aboriginal spectators. But this happened at Woodburn early in May. The referee evidently felt that boomerang-dodging was not part of his job, and the Richmond-Clarence Rugby League decided to temporarily abandon matches at Woodburn. Matches may resume when the playing field is fenced, and after arrangements have been made for a policeman to attend all future matches there. They certainly take football seriously up Woodburn way.

● The Woodburn boomerang (above) was wielded in anger, but on the same day in May, in Peak Hill, a boomerang was presented in friendship to Mr E. A. Willis, the Chief Secretary, as a symbol of his promise to return to the town. Mr Willis, who is also Minister for Tourist Activities, visited Peak Hill on a trip through the central west of N.S.W., and said that the region had a big future in promoting tourism. He spoke to several Aboriginal people and inspected Aborigines Welfare Board houses in Dubbo and Peak Hill.

● Louisa Lui, a 17-year-old Tongan girl, can walk again, but it took four operations and a six-months stay at Sydney Hospital. Louisa, who has been paralysed in both legs since birth and could only shuffle along, last year wrote to the hospital and asked for help; she wanted to dance like the other young people of her village. Sydney Hospital offered her free treatment and transport from Sydney to Tonga, and a Tongan mission paid her fare to Sydney. She made many friends at the hospital, but you couldn't say that she was sorry to leave for her home, now that she can walk—and dance.

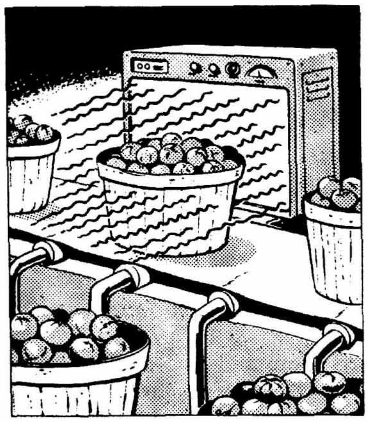
● Brewarrina is a hot, dusty little town, and it's easy to understand why the opening of a new swimming pool there a few months ago was hailed as "a day of joy". Many people already have swum in the pool, which is open to everyone, but its full benefit will not be noticed till next summer. But what a change to Bre' then!

● More than 2,000 Aborigines and 200 Torres Straight Islanders have enrolled to vote in Queensland's next election. Legislation passed by the Queensland Parliament last year gives adult Aborigines and Islanders the right to vote, but does not compel them to do so. Electoral officials said the enrolment response had been particularly gratifying.

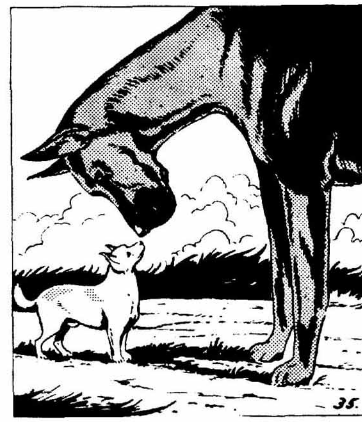
● In a one-day work-out, designed to present education problems to the public, more than 350 University of New England students worked on Armidale Aboriginal Station. The people of the Station probably would like to see more of this kind of student demonstration.

IT'S A FACT

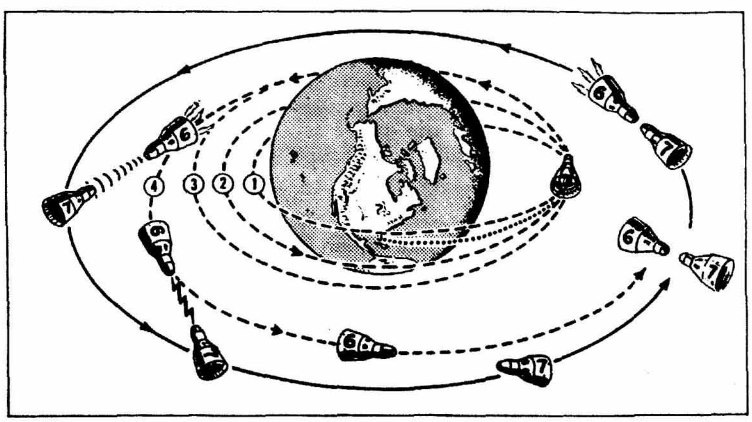
Niagara Falls is really two falls -- the Canadian or Horseshoe Falls and the American Falls. They are on the Niagara River which forms the international boundary between the United States and Canada. The Falls are gradually moving upstream. Action of the water on the soft rock undermines the hard rock of the river-bed which then breaks off. The Canadian Falls, the larger of the two, has receded about 400 meters since 1678.



Among the many peaceful uses of the atom none holds more promise than the "irradiation" of food. Fruit, vegetables and meats subjected to the irradiation process will last more than double the time before spoiling. The U. S. Atomic Energy Commission and the U. S. Army are conducting joint experiments with irradiated foods. The results will benefit both grower and consumer. Carefully controlled doses of atomic radiation slow the spoiling process without changing the taste or the appearance.



The great variety of dogs demonstrates the effects of careful breeding. Since dogs were domesticated 8,000 to 10,000 years ago, they have gone through about 10 times as many generations as man. Dogs now range in size from the little Mexican Chihuahua to the Great Dane, 40 times larger. They also vary in color, speed and stamina. Such marked differences contrast sharply with wild animals which are difficult to tell apart.



RENDEZVOUS IN SPACE – Gemini-7, carrying Astronauts Borman and Lovell, will be launched into a 298-kilometer circular orbit (solid line). About 10 days later, Gemini-6, with Astronauts Schirra and Stafford aboard will be launched (dotted line) into an egg-shaped orbit, averaging some 80 kilometers below that of Gemini-7.

Being lower, Gemini-6 travels faster. As it gradually overtakes Gemini-7, Schirra and Stafford will fire their rockets raising their orbit in steps (dashed line). During their fourth orbit, they will blast themselves to a rendezvous with Gemini-7. The two spacecraft will be facing each other for radar and visual contact.

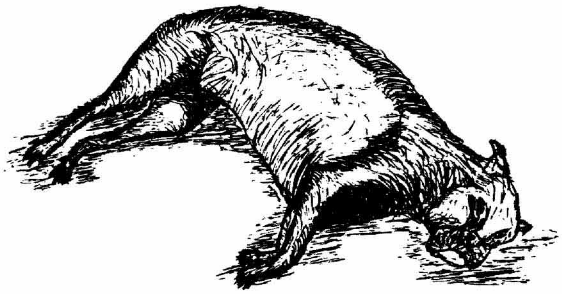
Gemini-6 will move from below to a position in front of Gemini-7, firing a rocket blast in order to settle into the same orbit. A few gentle puffs will bring Gemini-6 a few meters from her sister craft. Within two days of her launch Gemini-6 will come back to earth. Borman and Lovell will remain in space 14 days to see how well they endure prolonged weightlessness.

Pete's Page

Hello Kids,

Not long ago I asked a boy if he could draw; he said "no". Then I asked him if he had ever tried to draw, and he answered "no" to that question, too.

A lot of people think that way about drawing, and other things. They seem worried about what "other people" will think of their attempts; but in most cases those "other people" have never tried either—and would not be as good even if they did try. Don't be one of the "other people", boys and girls.



One day I decided to draw my big dog. She was asleep on the floor (she usually is) so she couldn't object. Even though I had never before drawn a dog (or much else, for that matter) I thought I would give it a try. So I did.

My picture will not win a drawing competition, but doing it gave me a great amount of pleasure. And that's the important thing. You can see that my drawing is of a dog, and that's a good start. If you look closely you will be able to tell what breed she is (she's a Boxer); and if you had seen her before, you would know that she is *my* dog.

Remember this: until you try to do a thing, you don't know whether or not you can do it.

'Bye for now kids.

See you next time,

Pete

ANSWERS TO MAY PUZZLES

Geographical Alphabet

Amazon, Baghdad, China, Delta, Everest, France, Grapes, Helsinki, Isotherms, Jute, Kenya, Lima, Monsoons, Nile, Oasis, Peru, Quetta, Rice, Sahara, Typhoons, Uruguay, Volcano, Witwatersrand, Xingu, Yangtse, Zambesi.

Animals in Lines

Baboon; jackal; jaguar; donkey.

NEW PUZZLES

Odd One Out

Four of the words below have something in common, but the fifth is out of place. Which—and why?

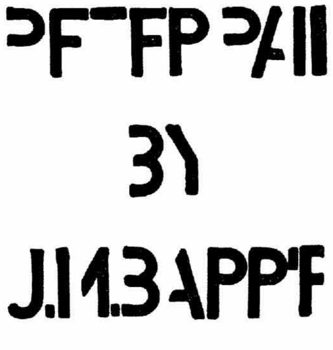
Mississippi, Nile, Amazon, Fujiyama, Zambesi.

How Good Is Your General Knowledge?

1. How long is the Suez Canal?
2. What is the name of the American "satellite" that has made television, radio and telephone communication possible across the world by using outer space?
3. The Americans call their base for sending off space-rockets, Cape Kennedy. Where is the base that British and Australian scientists use?
4. Where is Lusaka?
5. There are five Great Lakes between Canada and the U.S.A. Can you name them?
6. What is a Laughing Jackass?
7. Where is Table Mountain? Why do you think it is called that?
8. President Roosevelt of the United States once said that every man in the world must have the Four Freedoms. Do you know what they are?
9. What is the name of the famous woman scientist who, with her husband, discovered radium?
10. Can you describe the flag of Malaysia?

LINES PLEASE

A straight line added to each of the incomplete letters will form the name of a well-known book and its author.



Sydney: V. C. N. Blight, Government Printer—1966