

MEET THE ORIGINAL BILLY BUNTER
In the stories that made your parents laugh

LOOK AND LEARN

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EVERY MONDAY—PRICE ONE SHILLING

**Exciting Eight-page
EXTRA Inside
MAN AGAINST
ANTARCTICA**



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OUR COVER PICTURE

In this age of the jet plane, there are few places not covered by air routes. But there is one continent that few readers of LOOK AND LEARN are ever likely to see and that is Antarctica. It is about 47 times bigger than the United Kingdom, and covered with a sheet of ice thousands of feet thick. It is in darkness six months of the year and in summer the temperature rarely rises above freezing point. Yet many explorers—Amundsen, Scott, Hillary and Fuchs to name a few—have tried to discover its secrets—and the work still goes on. Antarctica, its past, present and future, is the subject of Focus this week.

BETWEEN OURSELVES

"I SAY, you fellows—"

Who is famous for that remark?

If you had been able to put the question to millions of people all over the English-speaking world in the last half century, they would have answered without hesitation: "Bunter!"

Yes, William George Bunter, the fat, ever-hungry schoolboy of Greyfriars whose adventures were told in a weekly paper called "The Magnet." Your father knew him—and your grandfather, too. They were regular followers of the adventures of Harry Wharton and his friends of the Remove Form at Greyfriars.

The stories have become classics of their kind. The author, Frank Richards, was a scholarly man

who wrote millions of words about Greyfriars—and as a recreation wrote one complete Bunter story in Latin!

Looking through the bound volumes of those stories, I decided to publish some of them in their original form in LOOK AND LEARN. I am sure you will enjoy these amusing stories as much as the youngsters of the past did. Your parents, too, might like to recapture the humour of their former favourite stories.

The adventures of Billy Bunter begin in this issue.

The Editor

How The Atlantic Got Its Name

PLATO, the Greek philosopher, used to tell a story about an island west of the Pillars of Hercules (Straits of Gibraltar) called Atlantis. About the year 9400 B.C. the people of Atlantis made an attack on Europe, but they were beaten off by the Athenians and expelled from the Mediterranean. Because of their wickedness the people of Atlantis had offended their gods and as a punishment Atlantis was swallowed up by the Western sea. Since then Atlantis, real or legendary, has given its name to the Atlantic Ocean.

PAUL DRAKE

Sandown, I.O.W.

The Empress of Britain was a British liner of 42,348 tons completed in 1931. She brought King George VI and Queen Elizabeth back to England after their tour in Canada and the United States in 1939. In 1940 the ship was attacked by German bombers off the coast of Ireland and heavily damaged. She was taken in tow by tugs, but two days later was sunk by a German submarine.

Flash Back

I WONDER if you know what a "flash" is. It is a piece of broad black silk with long ends, which is attached to the back of the tunic collar of the Royal Welch Fusiliers. This is a relic of the days when soldiers wore their hair long and in plaits. The flash served to keep hair grease from soiling the back of the tunic.

HELEN JOHNSON

Oxford.

Fit For A Queen

GIRL readers may like to know the history of the Queen's dolls' house which is kept at Windsor Castle. This miniature house, perfect in every detail, was designed by Sir Edwin Lutyens in 1923. It was furnished by leading artists of the time to a scale of one inch to a foot. Queen Mary exhibited it at the British Empire exhibition of 1924, and later it was put on view at various places in aid of charity.

SUSAN MORGAN

Bristol.

What Knot?

COULD you please tell me the origin of a phrase which I have often read: "Cutting the Gordian Knot"?

STEVEN PHILPOT

Newcastle-upon-Tyne.

The Gordian knot was a knot which a Phrygian king had used to bind his chariot yoke. He had tied the knot so tightly that no one could undo it. Legend had it that whoever untied the knot would become ruler of all Asia. Alexander the Great, one of the world's leading soldiers and statesmen, was marching through Asia when he came across the famous knot. Taking his sword he cut the knot through with one stroke. From that day the expression "cutting the Gordian knot" has been used to describe the solving of a difficulty by a sudden bold stroke.

Old Craft

CAN you tell me what a trug is, please?

CAROL JAMES

Victoria, London.

A trug is a kind of basket, made of wood strips. Thin strips of willow or other soft wood are nailed to a frame of birch or hazel. Trugs are usually used by gardeners for carrying fruit and vegetables. Trug-making is an old craft and many are still produced in Sussex.

Giant Beetles

CAN you tell me the size of the biggest beetles the world?

RONALD ANTHONY

Taunton, Somerset.

The largest members of the beetle family are the African goliaths and the elephant beetles of the West Indies. They grow to a length of six inches.

Quick Quiz

NATURAL HISTORY

- How many of these birds nest in Britain? (a) Turtle dove, (b) Common eider, (c) Black guillemot, (d) Redshank.
- What colour are the flowers of the flax plant?
- In which country would you expect to find a platypus?

LITERATURE

- "Boz" was the nom-de-plume of a famous English writer. Who was he?
- Wordsworth, Coleridge and Southey are grouped as poets under a common title. What is it?
- A famous English poet was imprisoned by King Charles II after supporting Oliver Cromwell. Who was he?

PEOPLE

- Was Modigliani: (a) a politician, (b) a painter, (c) an early scientific writer?
- What was Beethoven's Christian name?
- What is the name of the King of Jordan?

SPORT

- In which game is there a rook, or castle?
- Who was the captain of the West Indies cricket touring team in England this summer?
- Which of these boxing weights is the heaviest: (a) bantam, (b) fly, (c) welter?

WORDS

- What is legerdemain?
- Is locution allied to (a) mathematics, (b) speech, (c) train classification?
- What would a piscatorial society be concerned with?

HISTORY

- What was the name of the King of England who succeeded William II?
- In the years 1799 and 1800 trade unions were forbidden by Acts of Parliament. What were the Acts called?
- Who commanded the English fleet at the Battle of the Nile?

GEOGRAPHY

- Which of these rivers is the longest: the Ganges, the Volga, or the Shannon?
- What is the capital of Ceylon?
- What is the name of the narrow channel that separates the island of Anglesey from Wales?

ANSWERS ON PAGE 26

Printed in England by Odhams (Watford) Ltd., and published by Fleetway Publications Ltd., Fleetway House, Farringdon Street, London, E.C.4. Subscription rates: Inland, £3 16s. for 12 months, £1 18s. for 6 months. Abroad £3 13s. 6d. for 12 months, £1 16s. 9d. for 6 months; Sole agents: Australia and New Zealand, Messrs. Gordon & Gotch, Ltd. South Africa, Central News Agency, Ltd., Federation of Rhodesia and Nyasaland, Messrs. Kingstons, Ltd. LOOK AND LEARN is sold subject to the following conditions, namely, that it shall not, without the written consent of the Publishers first given, be lent, resold, hired out, or otherwise disposed of by way of Trade except at the full retail price as shown on the cover; and that it shall not be lent, resold, hired out or otherwise disposed of in a mutilated condition or in any unauthorized cover by way of Trade or affixed to or as part of any publication or advertising, literary or pictorial matter whatsoever.



Canadian Pacific's new Empress of Britain

Fatal Ship

WHAT liner was originally called Empress of Britain?

JOHN STAINS

St. Albans, Herts.

Voices Have Wings

... when they are picked up and sent on their way by the electrical "ear" of the microphone

IN this electronic age, microphones are almost as familiar as cups of tea. They are to be found on every telephone; they are used by every pop singer, broadcaster and train announcer. Doctors use them to listen to heart sounds; very sensitive ones picked up the voices of people trapped 30 feet below the ground in the Skopje earthquake disaster.

Whatever their shape and size, whatever their use, microphones all do the same job—they change sound waves into electrical vibrations. Why do we want them to do this?

Well, take the telephone as an example. When a friend rings us up, we listen to his voice coming from perhaps miles away. Actually it is not his voice because it could not travel along wires anyway. *But electrical impulses can.* That is the task of the microphone—to turn sound vibrations into electrical vibrations which can be transmitted along wires or by wireless, and converted back at the other end into sound waves which we can hear.

The conversion back to sound is achieved by passing the varying electrical currents through electro magnets which exert a pull on a metal plate or diaphragm. The diaphragm vibrates, stirs up the air, creates sound waves which approximate to the ones at "the other end" which began it all!

The earliest microphones had a thin diaphragm with a small capsule attached to it containing tiny granules of carbon. An electric current flowed steadily through the granules.

When sound waves were created (as, for example, by somebody speaking) the diaphragm vibrated, the carbon granules were shaken up, and the electrical current flowing through them fluctuated in a sort of electrical "imitation" of the original sound waves.

Today carbon microphones are used mainly in

telephones. They were used by the B.B.C. in the early days of broadcasting, but other types have superseded them because they can reproduce sounds more faithful to the original. The "moving coil" is one of these.

In the moving-coil microphone there is a diaphragm, attached to which is a tiny coil of wire moving freely between the poles of a powerful magnet. In this case the sound of a voice makes the diaphragm vibrate and a current is generated in the coil as the diaphragm moves it between the magnet's poles, varying according to the original sounds.

Aluminium Strip

THE "velocity" microphone, used in broadcasting and TV studios, has no diaphragm and no coil. Instead, a fine strip or "ribbon" of aluminium sits between the poles of the magnet. The ribbon vibrates when "bombaraded" by sound waves (like a diaphragm does)—and because it is rapidly moving between a magnet's poles an electrical current flows through it.

The most curious type of modern microphone uses a crystal to generate a fluctuating current.

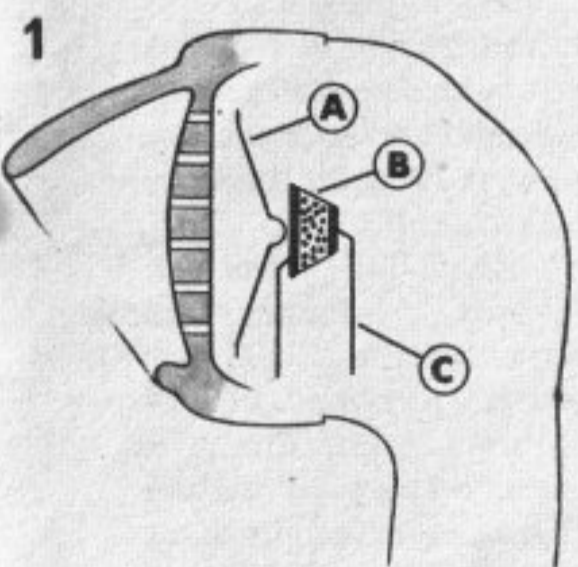
Certain crystals, like quartz and rochelle salts, show an odd scientific property called the "piezo-electric" effect. When they are compressed or bent, these crystals have particles of electricity or electrons literally "squeezed" out of many of their billions of atoms.

The crystal microphone consists quite simply of a diaphragm which is connected by a short lever to a rochelle salt crystal. One end of the crystal is clamped. As the diaphragm vibrates the lever rapidly bends the crystal back and forth, generating a fluctuating electric current which is "collected" by two small pieces of metal foil (see diagram).

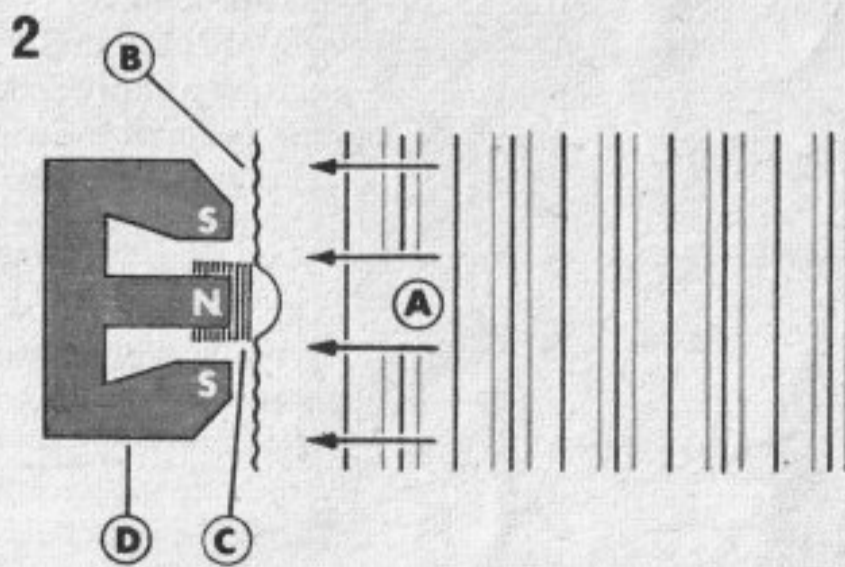


Modern "pop" singers like Cliff Richard rely upon the microphone to pick up the quieter tones of voice which would not otherwise be heard.

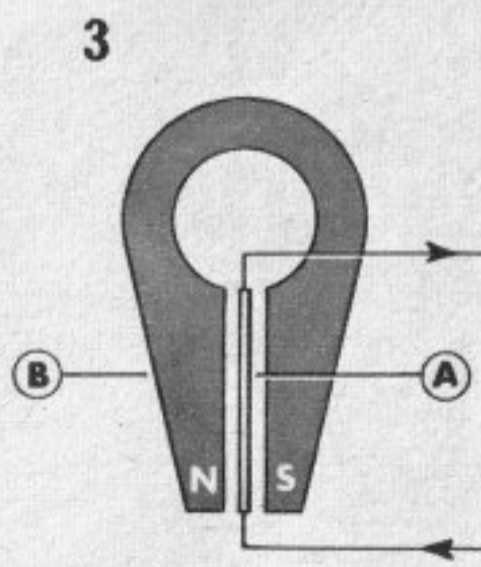
FOUR TYPES OF MICROPHONE IN USE TODAY



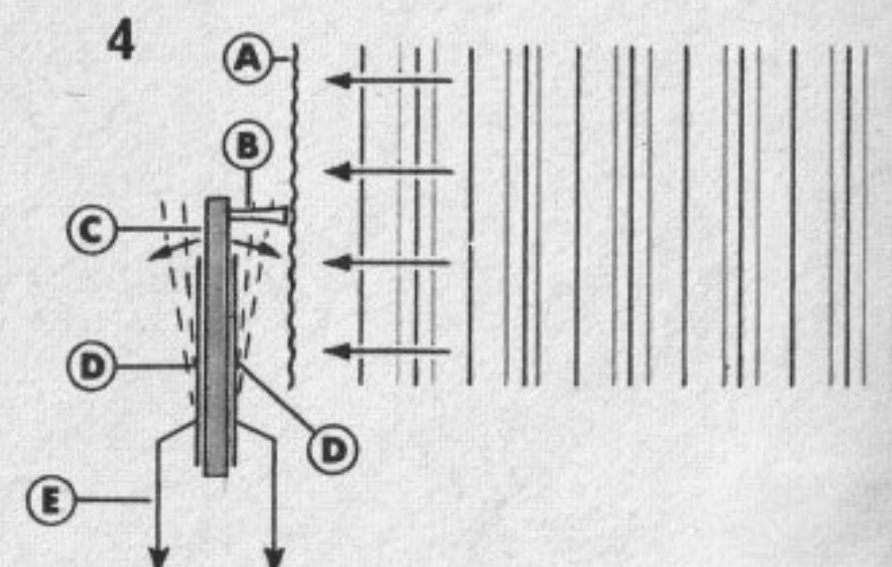
1 This is a side sectional view of the microphone in a telephone. Sounds make the diaphragm A vibrate. This shakes up the carbon granules in the capsule B, and varying electrical currents then flow through the wires C. It is these currents which are transmitted.



2 This sectional drawing through the mechanism of a moving-coil microphone shows how sound waves A vibrate the diaphragm B, making the coil C also vibrate between the poles of the magnet D, creating an electric current in the coil, as explained in the article above.



3 The ribbon, or "velocity" microphone does not have a diaphragm. The sound waves vibrate a thin aluminium ribbon A between the poles of a magnet B. As the ribbon moves rapidly in the magnet's "field of force," a varying electrical current is created.



4 In the crystal microphone, vibration of the diaphragm A causes a lever B to "bend" the salt crystal C. A current is created in the crystal which is collected by the two sheets of metal foil D connected to the two wires E. This is one of the most modern microphones in use.

NIGHT CRASH OF THE SKY SHIP

The maiden flight of the R101 was to have begun an exciting new chapter in aviation. Instead, it brought a tragic end to the dream of luxury airship travel

THE clock in the tower of St. Etienne, Beauvais, Northern France, had just struck. It was 2 a.m.

Poacher Albert Rabouille was setting snares for rabbits on the wooded hillside. The early morning of October 5, 1930, was cloudy with blustery winds and intermittent rain. No game-keeper was likely to disturb the man who worked by day in a button factory and took an occasional rabbit by night.

As Rabouille went about his illicit operations on the hillside he little realized that in a few seconds he was to be the only eye witness to a disaster that was to change the whole pattern of flying.

He knew—as did the whole world—that Britain's giant state-owned airship the R101 was on her first voyage to India via Egypt. Indeed, the fact had been front page news in every newspaper. The R101 would pass over Beauvais at any moment.

Rabouille drove in his last stake as he heard the roar of her engines. As he watched, the giant ship lurched and rolled drunkenly. She seemed to be coming straight towards him only feet above the tree tops. She swerved and dipped again. Then came the crash. A blinding flash lit the sky as millions of cubic feet of hydrogen in the ship's seventeen gasbags caught fire. No one had then discovered a fireproof gas capable of lifting such an immense ship.

Of the fifty-four people aboard the airship six miraculously escaped death by diving through the burning fabric. The others—and the R101—were burned to cinders.

The R101 was built at the Royal Airship Works, Cardington, Bedfordshire. She was to be the first of a fleet of airships larger than ocean liners that was to revolutionize flying. The idea of her makers was that she would spell doom to winged aircraft.

Twice a week the airships like her were to fly to

India with ten tons of mail and 130-150 passengers. The journey would be completed in seventy-four hours, compared with the normal seventeen-day sea passage. This was the manufacturers' dream.

The airship's gasbags held 5,500,000 cubic feet of hydrogen. She cost more than £2,000,000 to build and was as high as Nelson's column, as big round as Piccadilly Circus, and one-seventh of a mile long. Her engines had been designed originally to drive heavy locomotives in Canada. And inside her the passenger accommodation rivalled that of any luxury liner.

A large dining-room—seating fifty people at a time—was decorated in white and gold. Great windows lined the whole of one side. The lounge and observation saloon was as big as anything a first-class hotel could offer.

Teething Troubles

THE launching of the R101 at Cardington on October 12, 1929, caused a sensation. Half a million people motored to the Bedfordshire field to see her over the weekend. Coach firms ran special trips. At times the queue stretched farther than the eye could see.

But behind the scenes all was not well.

Her heavy engines had to be modified. In running they literally tore propellers from their shafts. They were far too heavy. Designers had estimated nine-ton engines would be needed. Those used weighed seventeen tons. In addition, the airship lacked buoyancy. So back to the works she went to be cut in two and have a new bay built into her.

Then something went wrong with her fabric covering. It rubbed against the steel girder framework and in places powdered to dust. Even when moored, great strips of fabric were torn off by the action of the lightest winds. The gasbags,

too, sprang leaks. After her first trial she limped home with fifteen of them literally riddled with holes.

The airship was patched up, but twice her maiden trip to India was put off. Finally, on October 4, 1930, it was decided that she would make the maiden flight. This would show the world how travellers of the future would be transported.

At six o'clock in the evening the passengers boarded her. All day long the barometer had been dropping steadily. Ahead of R101 lay squalls and heavy rainstorms.

Optimistically the Air Minister, Lord Thomson, told all: "She is as safe as a house—except for the millionth chance." With him aboard was Sir Sefton Brancker, Director of Civil Aviation and Wing Commander R. B. Colmore, Director of Airship Development. All were to die. But all were then supremely confident.

Right from the start there was trouble. Nine and a half tons of water were taken aboard as ballast to keep R101 at the flight level of 1,000 feet. Within seconds of take-off four tons had to be dropped to compensate for the heavy fuel load.

Then, hardly was the great airship free of her mooring when she ran into rain clouds and began rolling heavily. When she passed over London just after 8 p.m. one engine aft had already failed.

In the ship the crew struggled to restore life to the cut engine. But they were over mid-Channel before they were successful, and by then she was losing height; only 700 feet separating her from the white-topped waves. More ballast was thrown out and she lifted to 1,000 feet.

Losing Height

AT 11.26 p.m. R101 crossed the French coast at Pointe de St. Quentin. The wind was freshening to 35 m.p.h. and gusts were clutching at her fabric, making headway difficult. On she went, passing Poix aerodrome halfway between Abbeville and Beauvais, losing height again to 900 feet above ground.

The few people who were awakened by her engines got out of bed to see her pass. Disaster was seconds away. Those who opened their windows to see the ship told the inquiry after the crash that she was rolling and pitching about 600 feet up.

Only Rabouille the rabbit snarer saw what actually happened. Almost before he could move the pride of the air was a tangled mass of red hot girders. Dead and injured were lying on the grass around where she had crashed.

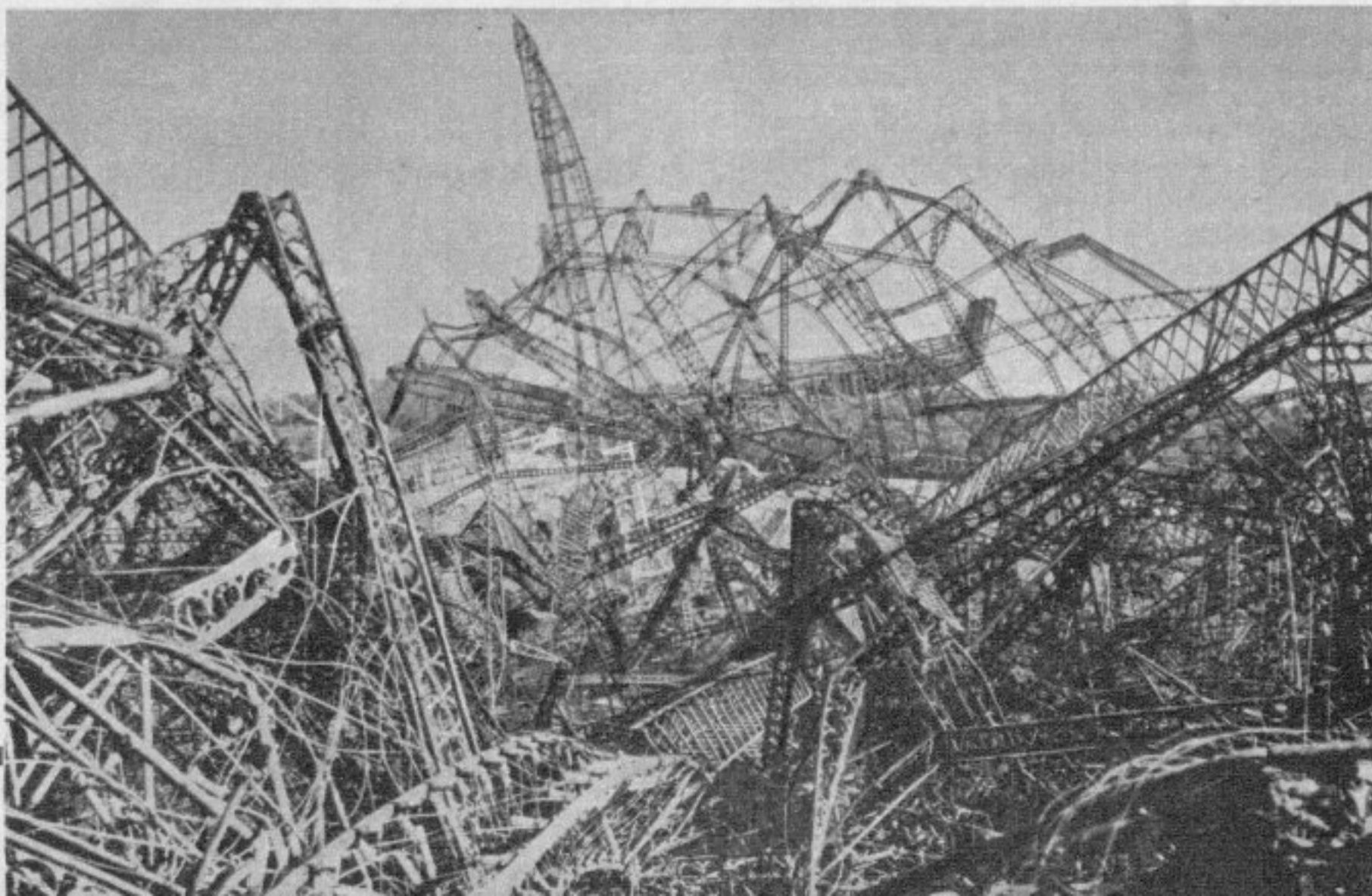
No one could tell just what had happened. But the official inquiry blamed "a leakage of gas probably accentuated by a specific misfortune such as the ripping of the forefront of the envelope." Had the gas not caught fire it is probable all lives would have been saved and the airship project of the Government might have continued.

Now all there was to show for the vast plan was immense grief, the needless loss of forty-eight lives and a mass of wrecked girders.

Sadly all that remained of a £2 million dream was sold for scrap. It fetched £504.

ALL THAT WAS LEFT, A HEAP OF SCRAP METAL

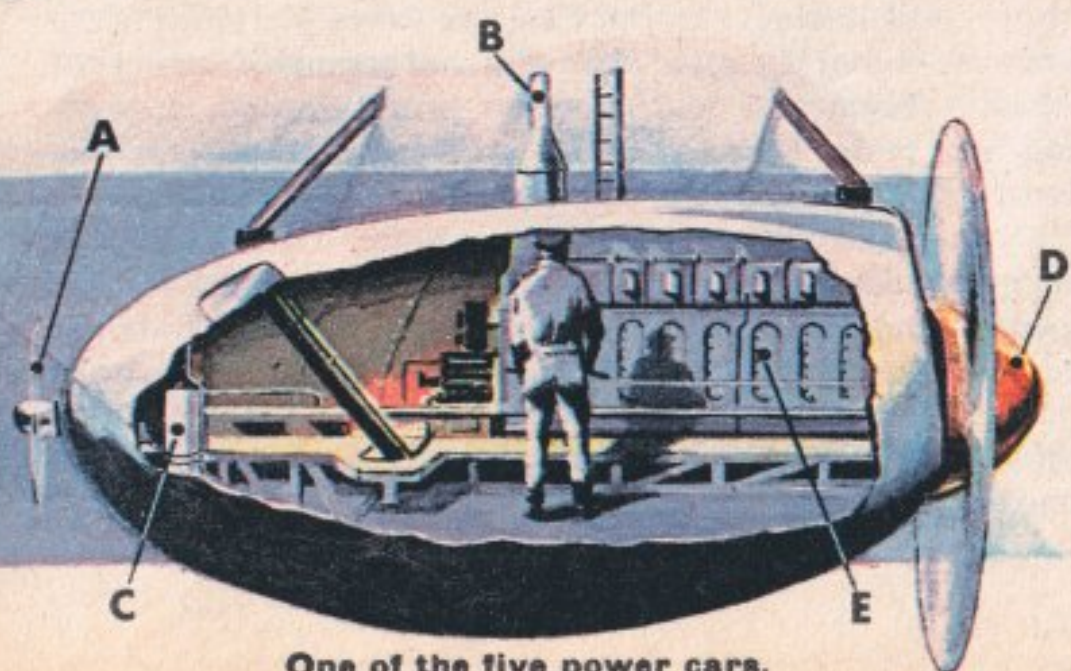
It cost £2 million to put the R101 into the sky, but after the crash, she was worth only what she would fetch as scrap metal—£504. This picture was taken only a few hours after the Air Minister said "She is as safe as a house."



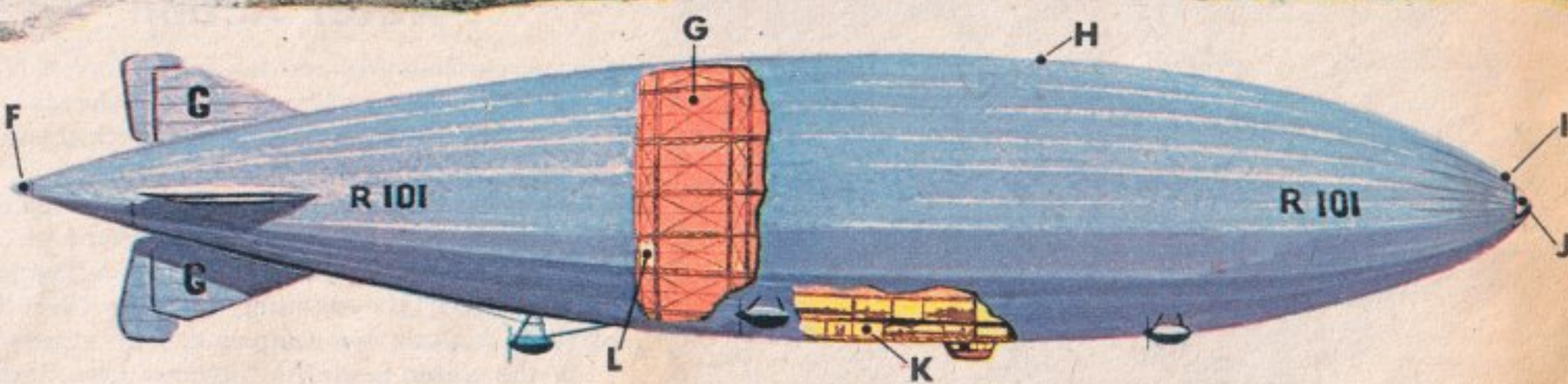
**DISASTERS
THAT
SHOCKED
THE
WORLD**



As the poacher watched, the giant airship lurched and rolled drunkenly. She seemed to be coming straight towards him.



One of the five power cars.



Cut-away Diagram of the R101 Airship

- | | |
|--------------------------------------|-----------------------------|
| A. Generator propeller. | G. Gas bags. |
| B. Steam cooling pipe. | H. Top look-out. |
| C. Starting engine. | I. Bow look-out. |
| D. Variable pitch propeller. | J. Mooring eye. |
| E. 650 h.p. Beardmore Diesel engine. | K. Passenger accommodation. |
| F. Stern look-out. | L. Fuel tanks. |

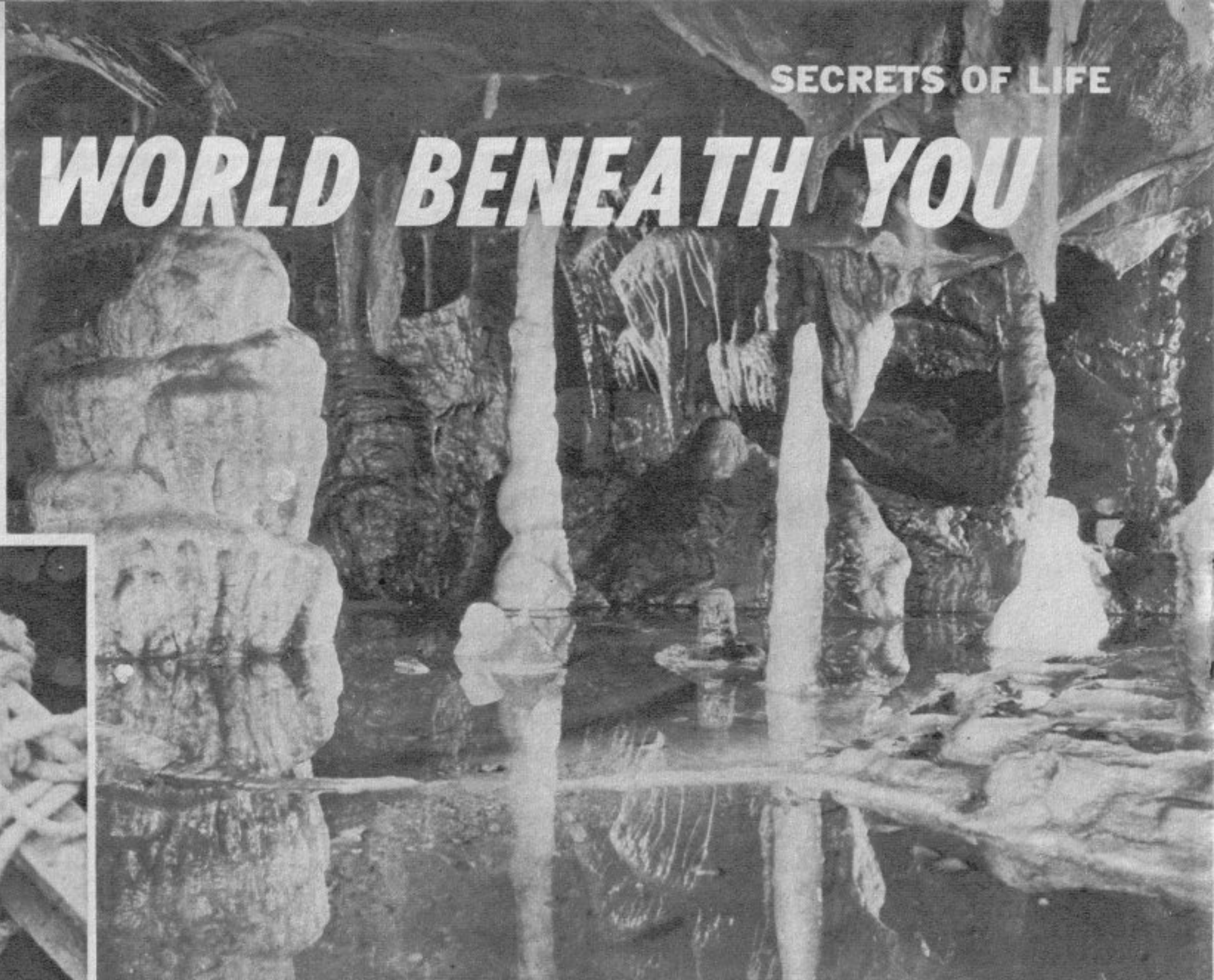
THE DARK WORLD BENEATH YOU

Thousands of years ago man made his home in underground caves and tunnels. Today pot-holers risk their lives to discover the secrets of the lonely and silent world beneath the ground



Pot-holing is slang for "speleology"—the science of cave exploration. This pot-holer reaches a deep cave by descending a narrow disused mine-shaft on a shaky rope-ladder.

Many tunnels and caves are wet and slimy from the water that has seeped through the limestone hills. Exploration of the caves requires skill and courage, and all experienced pot-holers carry lamps on their helmets.



These beautiful twisted pillars have been made by the constant drip of limestone over the centuries from the roof of the cave.

A NEW hobby has grown up in recent years—the hobby of cave exploring, or "speleology." Speleologists are the people who brave the dark wilderness beneath the earth.

This wilderness is a hidden world of caves big enough to hold the Queen Mary, of vertical "pot-holes" that plunge through solid rock to depths of thousands of feet, of lakes bigger than cricket pitches, and of labyrinthine tunnels that turn and twist for miles on end.

For many thousands of years these underground caves have remained unexplored. Yet within them lie many mysteries waiting to be unearthed.

Over fifty thousand years ago, when the last Ice Age began to come to an end, primitive man used these caves as his home for protection from bitter weather and dangerous animals. As the cold weather disappeared, he left the caves for the plains, and learned to build huts and defend himself with weapons.

But the beginning of the caves goes back farther than the days of early man. They go back to the forgotten days of pre-history, when the only life on this Earth consisted of myriads of microscopic animals living in the sea.

As the centuries passed, the limestone skeletons of these animals drifted down to the sea bed. In their billions they piled up to form layers of limestone rocks. Then, as the earth suffered huge and violent upheavals, the limestone rocks were split up and forced into layers.

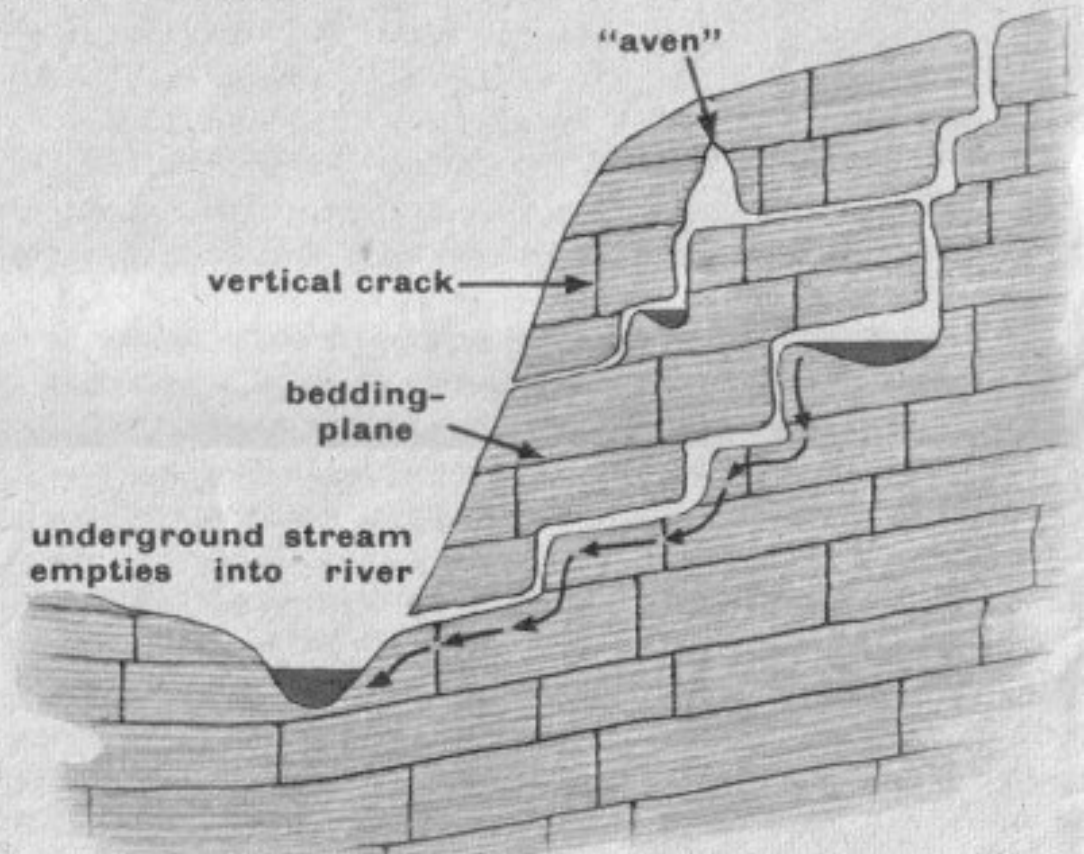
Water Action

LATER earthquakes and landslides forced many of these limestone layers up above the sea level. The earthquakes also caused huge vertical fissures to appear, making a kind of brickwork.

The water from rivers and streams flowing over the limestone hills seeped down through the vertical cracks, and then filtered along horizontally between the dividing lines or "bedding-planes," forming low tunnels called "crawls."

As the water made its tortuous way through the hills it slowly eroded the limestone and formed huge caves and potholes.

The water also became slightly acid as the carbon-dioxide in the air dissolved in it. This acid water ate away parts of the limestone,



The drawing (above) shows a section through an underground cave system. The potholes and tunnels follow the ancient bedding-planes and vertical cracks in the limestone through which the rainwater has been slowly dripping and seeping for ages, wearing away the limestone.

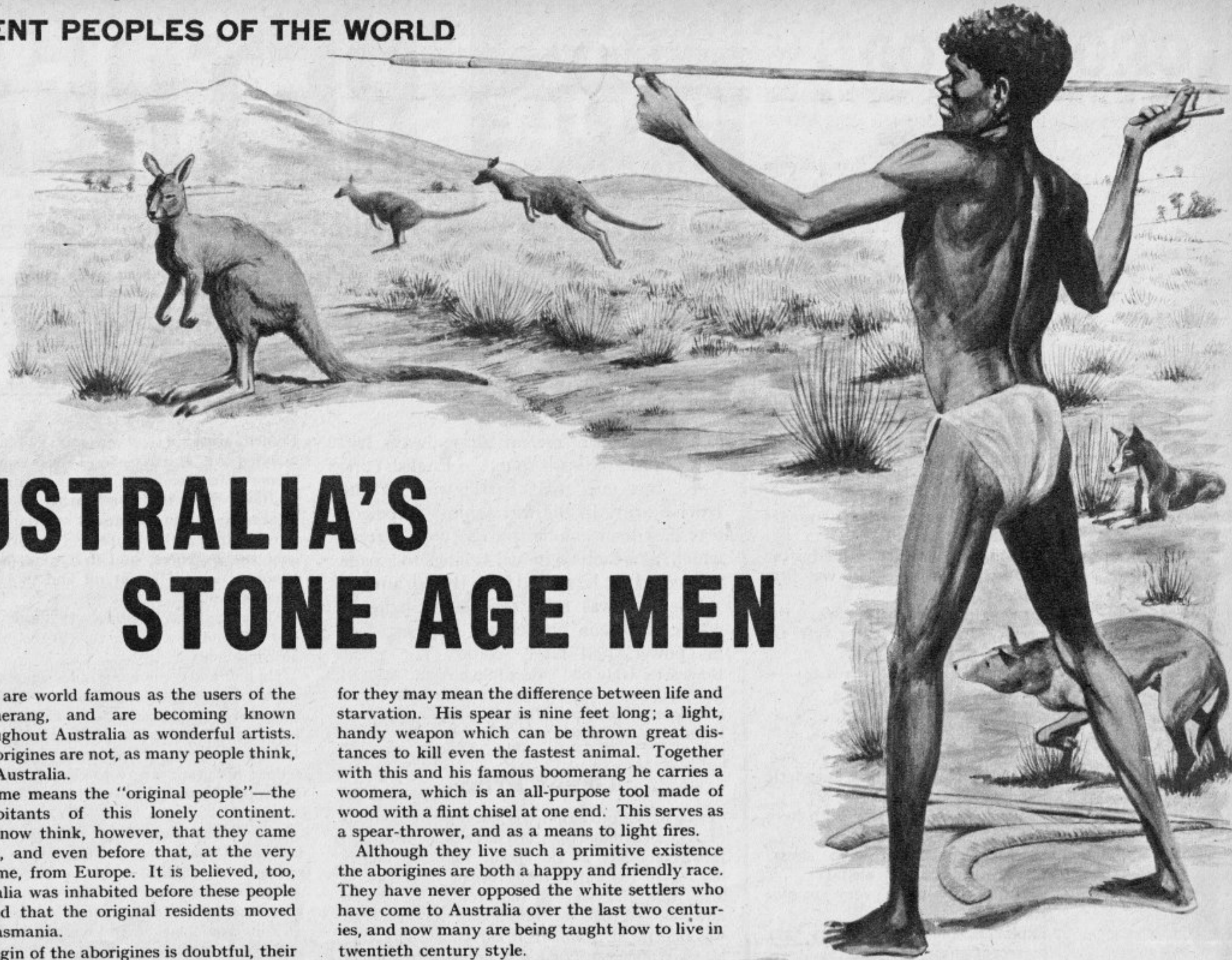
forming huge caverns and underground lakes.

Sometimes the water would erode away the roof of one of these caverns, forming an inverted funnel or "aven" as it is called by speleologists.

Sometimes, too, the roofs would cave in and block passages. Dripping water would form limestone deposits that hung down from the roof in long stalactites. The limestone would accumulate in steady amounts on the floor, forming needles or "stalagmites" that grew up into the air.

Despite the dangers, pot-holers continue to explore the world of caves enthusiastically, and speleology is already adding to our knowledge of history. In the Lascaux caves in France were found the most beautiful and strange drawings of bison and deer made by primitive man, a testimony that early man was not a stupid ape-like creature but a being with artistic impulses.

Caves are not only a mute witness to past history. They also teem with life, and a naturalist has much to learn from them. Over two hundred kinds of animals live in caves—flies, snails, worms of all kinds, shrimps and insects. Most of them are blind and white, after thousands of years of living in the dark and cold.



AUSTRALIA'S STONE AGE MEN

THEY are world famous as the users of the boomerang, and are becoming known throughout Australia as wonderful artists. But the aborigines are not, as many people think, natives of Australia.

Their name means the "original people"—the first inhabitants of this lonely continent. Historians now think, however, that they came from India, and even before that, at the very dawn of time, from Europe. It is believed, too, that Australia was inhabited before these people arrived, and that the original residents moved south to Tasmania.

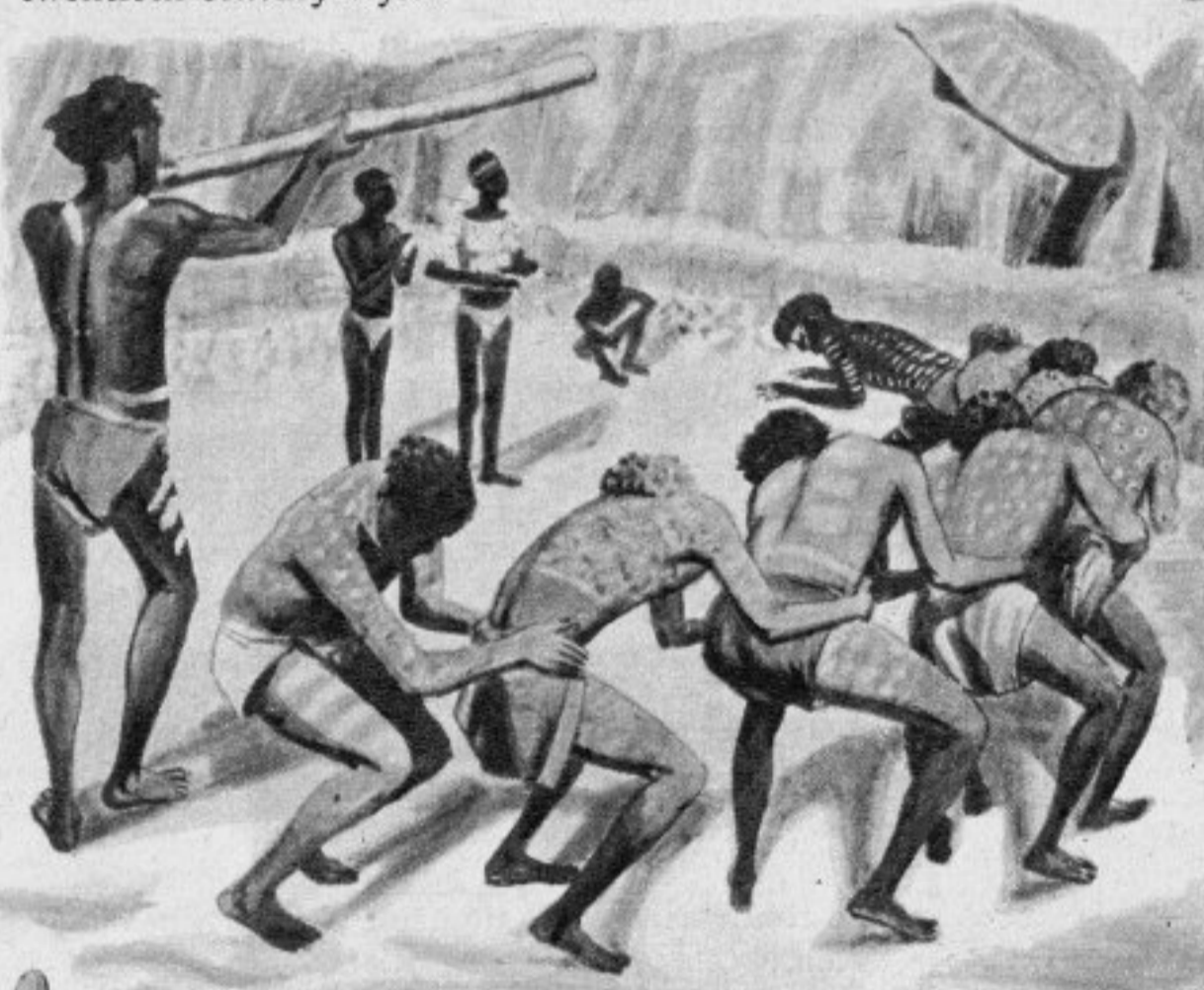
If the origin of the aborigines is doubtful, their way of life today is plain for all to see. The passage of the centuries, the invention of electric light and the petrol engine, have had no effect on this primitive people, for they still observe their ancient customs and hunt for food as their ancestors over 10,000 years ago must have done. In a world which is making strides in atomic research every year, the aborigines live the life of Stone Age man.

A nomadic people, they rarely live in one place for very long, and are engaged in a constant search for food. They have few possessions, and these are only essential tools and weapons.

To the aborigine his weapons are all-important,

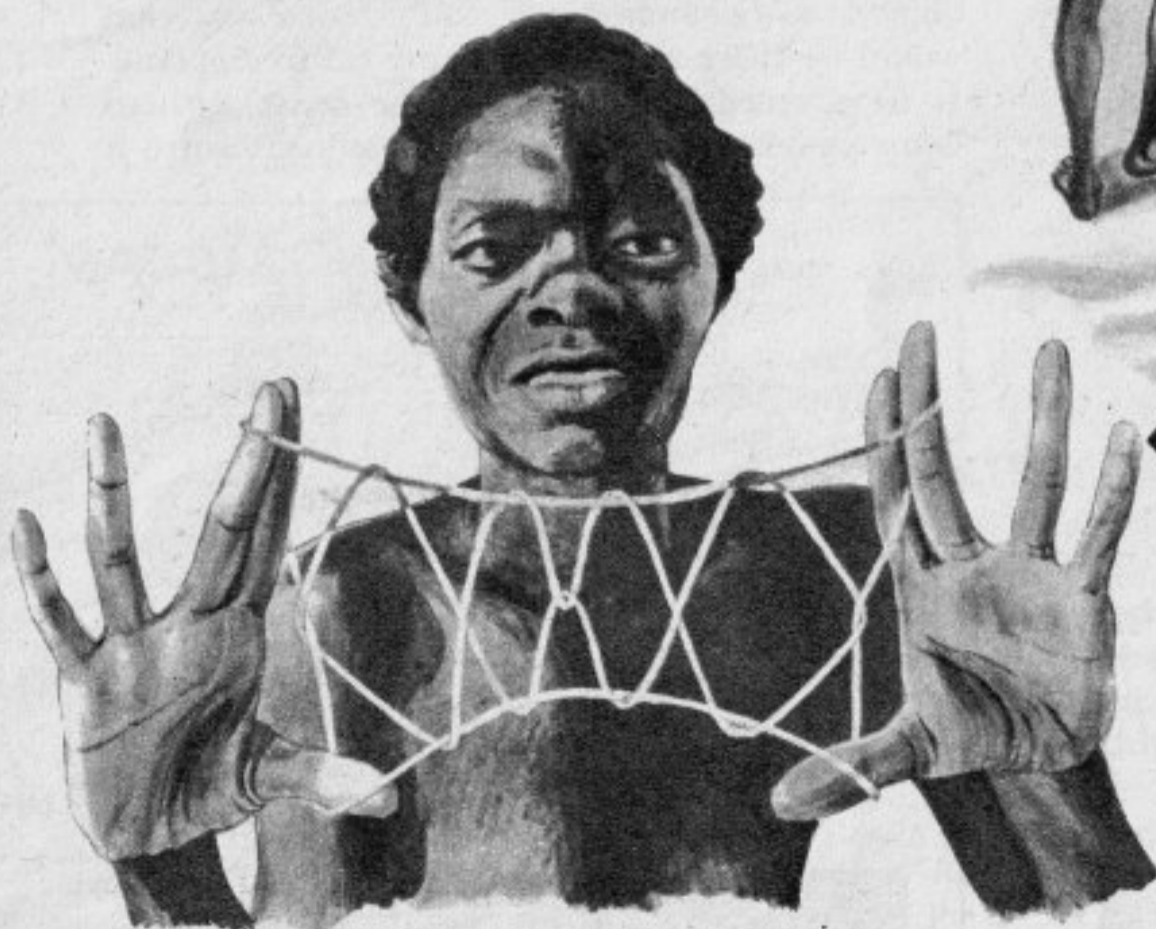
for they may mean the difference between life and starvation. His spear is nine feet long; a light, handy weapon which can be thrown great distances to kill even the fastest animal. Together with this and his famous boomerang he carries a woomera, which is an all-purpose tool made of wood with a flint chisel at one end. This serves as a spear-thrower, and as a means to light fires.

Although they live such a primitive existence the aborigines are both a happy and friendly race. They have never opposed the white settlers who have come to Australia over the last two centuries, and now many are being taught how to live in twentieth century style.

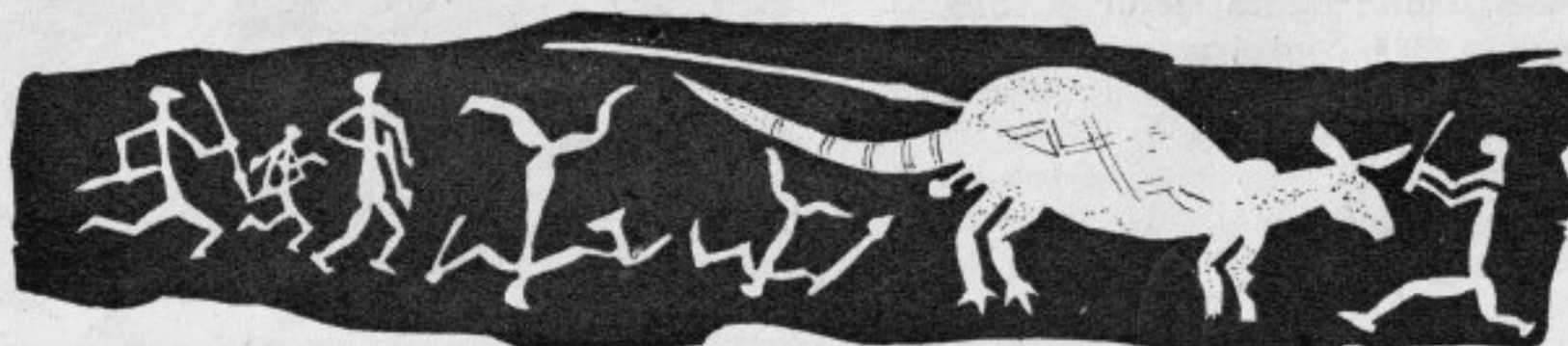


▲ The search for food is the main occupation of the Australian aborigines, and their skill as trackers is famous. To kill his quarry the hunter uses a spear and hunting-dogs.

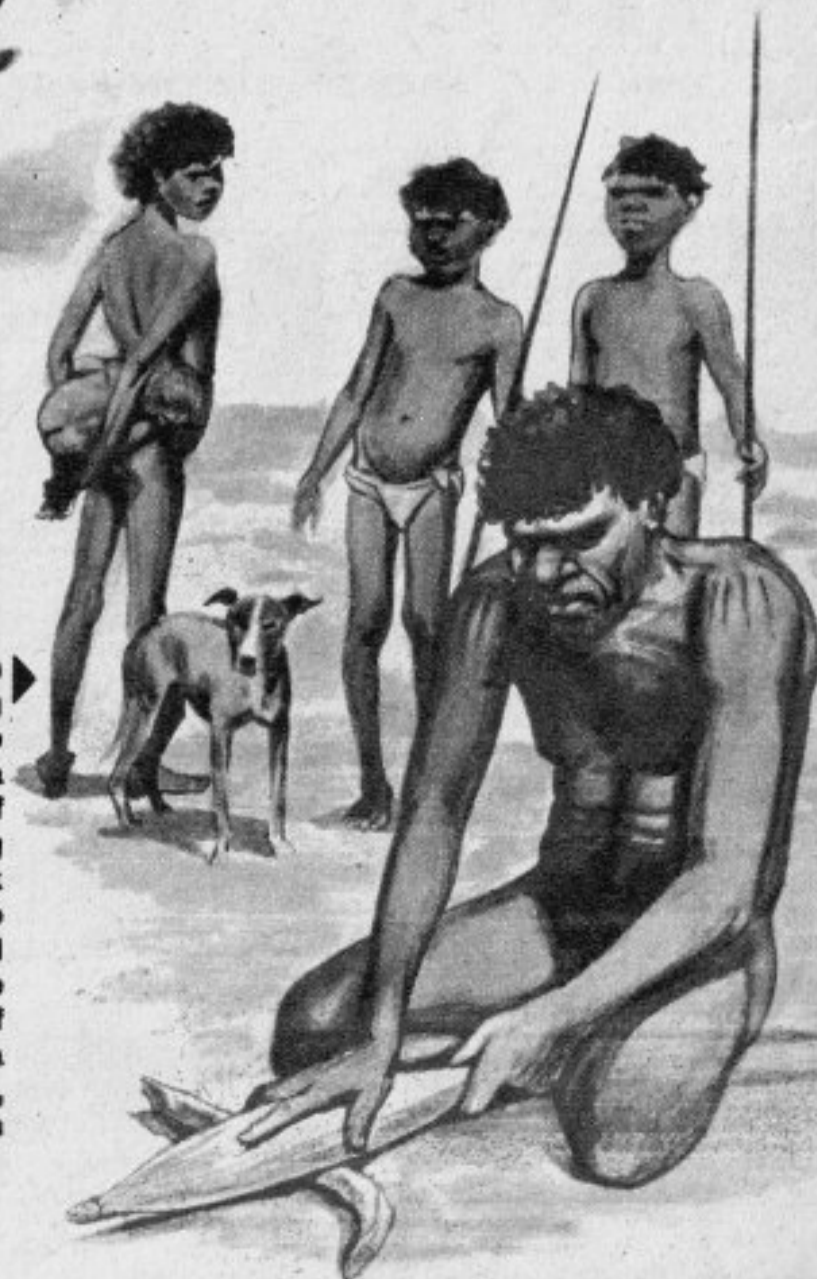
◀ Singing and dancing play an important part in the aborigines' life, and men often gather for a "corroboree." The patterns they paint on their bodies and the postures they adopt during the dances represent the animals they hunt. This picture shows a "corroboree" in North Australia.



◀ A form of sign-language in which the string tells a story, the "cats cradle" is used by the aborigines to recount legends, of which as many as two hundred may be told in this way. This method is used to teach children tribal history. The picture below is a translation of the patterns made by the aborigine with his string. It depicts the hunting of a kangaroo.



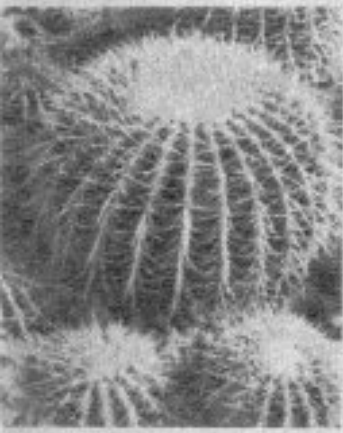
▶ The aborigine shown in the picture is "striking a light" by rubbing the tool called the woomera against another piece of wood. The resulting fire will be used to cook meat. Aborigines also eat certain roots and wild fruit, while the honey ant, the body of which is filled with a sweet, watery honey, provides the sugar in their simple diet.



CROSSWORD

ACROSS

1. Plants, often prickly, that grow in sandy desert country. (5)
4. The Christian name of Lord Nelson. (7)
8. Loch Ness may be the home of one. (7)
9. In this country bull-fighting is very popular. (5)
10. Edgar — Poe wrote *Tales Of Mystery And Imagination*. (5)
11. A strong flavouring used in puddings, cakes and sweets. (7)
12. A hunting-dog of the spaniel family. (6)
14. The fruit of the tree that young George Washington cut down. (6)
18. A donkey; but a laughing one is an Australian kingfisher. (7)
20. Fetters that were used for prisoners on board a ship. (5)
22. Glazed earthenware named after a Dutch town where it was first made. (5)
23. Town in Worcestershire, the centre of a fruit-growing vale. (7)
24. Put up with suffering. (7)
25. A healthy cat should have a — coat. (5)



CLUE TO 1 ACROSS



CLUE TO 10 ACROSS



CLUE TO 4 DOWN

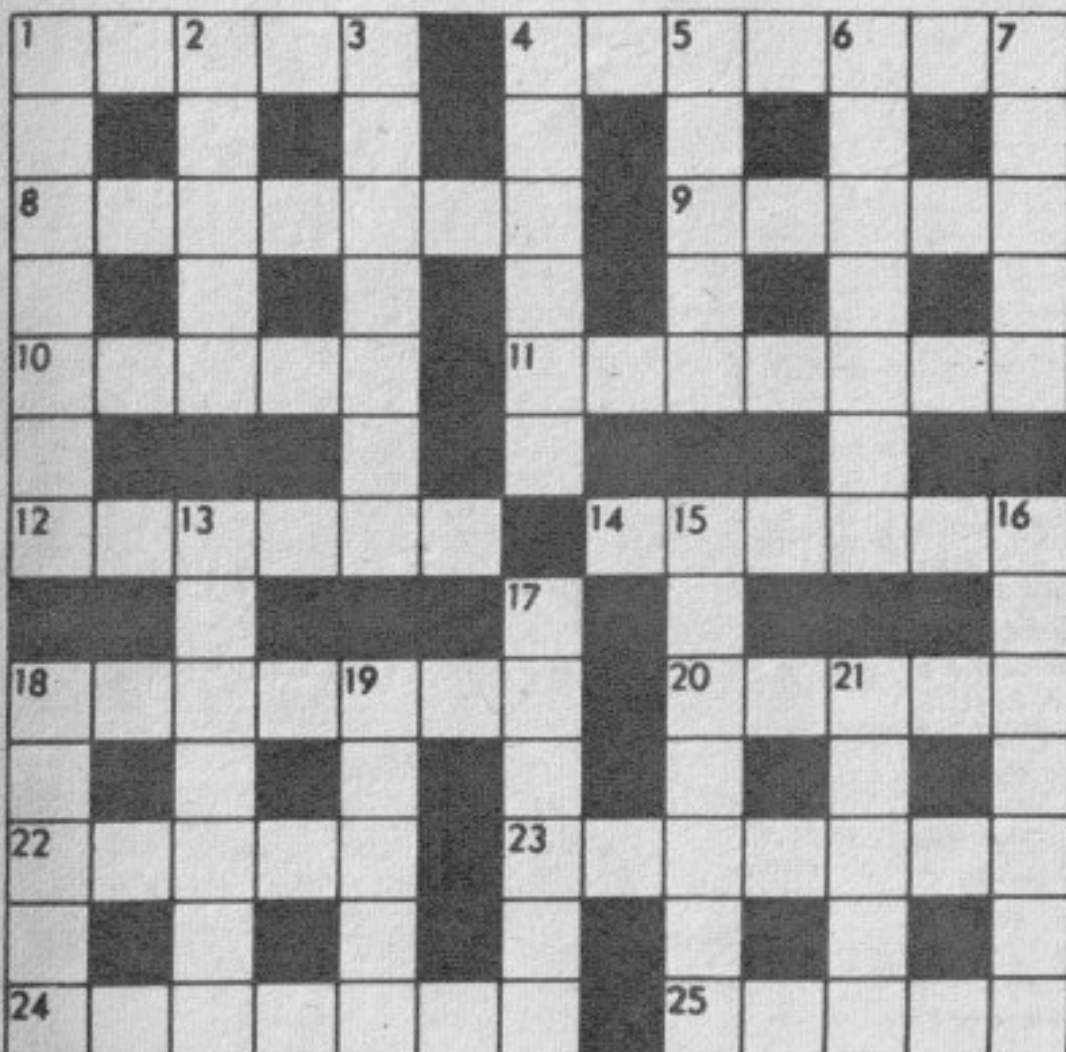


CLUE TO 16 DOWN

DOWN

1. An instrument with a magnetic needle that points North. (7)
2. Panama, or Suez? They both have one. (5)
3. Sort of concentration a chess-player needs to play well. (7)
4. An insect with a very painful sting. (6)
5. Explorers and mountaineers have to accept these dangers. (5)
6. It is his job to get footballers fit. (7)
7. The snow-leopard; it also means a weight. (5)
13. Brought an opponent down at rigger. (7)
15. Woman who hopes to inherit a fortune. (7)
16. Veil that covers all of the face, except the eyes, of Mohammedan women. (7)
17. Belgian port to which cross-channel boats go from Dover. (6)
18. He is in charge of a trial in a law court. (5)
19. Another word for change. (5)
21. An oxide of iron used for making yellow and brown pigments. (5)

SOLUTION ON PAGE 26



INTO BATTLE

Stories of the world's great conflicts

THE word "retreat" has always had an unpleasant sound to English ears. But one great battle won by the British army in the war against Napoleon was based on a long and arduous retreat which, as a tactical move, belongs to a page that could not be spared from British annals. The year was 1808, the place, Spain, where Napoleon himself, at the height of his power, had lately come. The great Emperor's army had entered Spain and attacked Portugal, but a British army landed on the coast had defeated one of his armies there and forced them back into Spain.

Great Army

THE battle of Corunna is noteworthy more as a tactical move than as a piece of heroism, and it was actually at this point that the tactics leading to the battle really began. The British army that had defeated the French in Portugal now followed the losers into Spain. At their head was General Sir John Moore carrying orders from his government in London to march to the north of Spain, join reinforcements landed there and then, together with the Spanish army, expel the French invaders. All of which was easily ordered but, as Moore was soon to find out, was not so easily done.

As soon as his army reached Spain, three major problems had to be dealt with.

The first problem was the weather. Winter had brought heavy snow, and fighting and marching were made the worse for it. It had already forced Moore to split his army into three parts to march independently to a rendezvous at Valladolid or Burgos.

The second problem was Napoleon. The Emperor had not idled his time in Spain. From France now he summoned the world's greatest army—255,000 Frenchmen flushed with conquests and anxious for battle. Moore's force was 23,000 strong; Moore was no fool and knew that there is a time to fight and a time not to fight, and that this was the time not to fight if he could avoid it.

Disastrous News

THE third problem was the local Spaniards. Far from being in a position to help him drive the French out of their country, they were being soundly beaten wherever they met the invaders. The truth was that Napoleon feared no more resistance from the Spanish, for his fighting machine had crushed them.

Moore had not marched very far when he heard the disastrous news that the French had occupied Valladolid and Burgos, his rendezvous, and that they had taken Madrid, which meant in effect that his plan of campaign involving co-operation with the Spanish army was finished, because there was now no Spanish army to co-operate with.

What was Moore to do? The question answered itself when news came of a different sort. The

RETREAT

Farther and farther backwards went the army of Sir John Moore. He could win a great victory for England—if his soldiers did not have to fight!

French army in and around Valladolid, commanded by Marshal Soult, was smaller than Moore's; further, Soult knew nothing of Moore's position. And this small army of Soult's was vital to Napoleon, because it was the only French force guarding the Emperor's supply lines from over the Pyrenees, and if it were defeated the Emperor would be cut off and in considerable trouble.

Moore did not hesitate. He drew his armies together and prepared to rush at the unsuspecting Marshal Soult.

He had not gone many miles when news of his intention reached Napoleon in Madrid. The Emperor was aghast and his camp was thrown into turmoil. In one simple tactical move a puny British army was impertinently threatening to reduce his grand army to chaos. Moore had to be stopped—and Napoleon himself would do the stopping.

Now it was Moore's turn to hear of Napoleon's change of plan, and his turn, too, for a swift change of tactics. He realized that the Emperor would very soon have four huge columns of troops on his tail, against whom his 23,000 Britons could never survive. But if he could draw the French on he would frustrate the Emperor's plan to march into southern Spain and conquer the whole country, because with the snow falling thick and fast there would be no time for further tactical changes.

In Pursuit

THERE is a time, thought Moore, when to retreat is to win. If ever there was a time for that, this was it.

The wind howled and the snowflakes whirled across the plains as the soldiers of France now bent their heads to the furious weather in pursuit of the soldiers of England. Corunna was Moore's objective—Corunna and the troopships that would be there to take his army off to England. If he succeeded in reaching the coast without being caught the chase would have been worth it



TO GLORY



many times over, for although he would not have cut the French supply lines he would have foiled Napoleon's bid to conquer Spain.

From the start the going was tough. The two armies were soon so close that the British rearguard frequently skirmished with the French vanguard. Napoleon, surveying the scene, saw that the first town the British had to make for was Benavente, and towards that place he drove his troops at amazing speed, sometimes covering more than thirty miles a day, in his determination to cut Moore off.

The British troops were marching into appalling difficulties. Snowstorms turned to blizzards and blocked the roads. There was little food left in their supply train and less still to be had along the line of retreat, for the local Spanish population, themselves hungry and without supplies, turned sour on their liberators and refused to offer any help at all.

No Delay

SOMEHOW the British reached Benavente. They crossed the River Esla in front of the town, exchanging fire all the time with the French advance units, and once on the other side they were able to rest for a couple of days and keep the French at bay. But there was no staying longer, for the whole of Marshal Soult's army was coming up dangerously quickly. The next objective was Astorga, thirty miles distant.

Lack of Spanish co-operation, lack of food and

probably a little shame at forever being on the retreat began to cause serious outbreaks of ill-discipline among the British army.

At one place General Paget, one of Moore's subordinates, was actually chastizing his troops for their behaviour when two men who had been caught plundering were brought before him.

"Hang them at once!" screamed the angry General.

The rest of the troops were paraded around a tree while the victims were prepared for their summary execution. At that moment a messenger rode in to report that the French Army was close by.

General Paget stepped forward and hurriedly addressed his troops.

"If I set these men free do you promise to behave yourselves in future?" he roared.

The shout of approval was unanimous. Three times the General made them repeat it. Then the plunderers were hastily freed and the soldiers raised their muskets and got on with the business of keeping the French at bay while their colleagues hastened the retreat towards Corunna.

Napoleon arrived at Astorga, gave one short look at the situation, and then gave up in disgust. Before he went south again he handed over full command of 50,000 men to Marshal Soult with orders to harass Moore and his impudent army.

Meanwhile, the British hurried on towards the coast while their rearguard took a terrible hammering from the pursuing French. To gain more speed, heavyweight encumbrances were

abandoned. Even the pay wagon, containing £25,000 worth of silver, was tipped into a valley—spilling a fortune over the rocks well out of the way of the oncoming French.

At last, ragged, barefoot and starving, they reached Corunna. And then—disaster! Not one of the troopships that were supposed to be there to take off Moore's army had yet arrived.

At Last the Ships

SIR JOHN bit his lip. There was only one thing for it. Grimly he turned his men about in a long line that now showed the French its face instead of its rear. The British were going to fight.

The soldiers, of course, were overjoyed. Sick of the continual retreat, a fight was what they wanted. Discipline and morale at once improved as muskets were loaded for the fray. To the credit of the French, they did not exactly hang back, either. One French sergeant was evidently so delighted at getting a chance to meet the enemy at last that, without waiting for his company, he charged the British line alone. Private Thomas Savage, of the 28th Hussars, stepped out from behind the cover of a rock and shot him, calmly commandeering his cloak and slipping it on to keep out the bitter weather.

Soon the hills were echoing to the sound of fierce musket fire. Moore, riding among his troops and urging them on against the enemy's far superior artillery, saw the British line hold an all-out French attack and repulse it. A tactical plan now formed in the British commander's mind; a turning movement from the flanks that would crush Soult's entire army. Then, at that vital moment, a cannon ball smashed into Moore's left shoulder and tore him from his horse.

Hastily they carried him to the rear of the line, but the wound was fatal, and Moore, architect of the glorious retreat to Corunna that had made Napoleon run the wrong way, died in the heat of battle. For a time there was confusion, for none of Moore's generals had known of the plan in their commander's mind, and as a result the chance of complete victory slipped from their grasp on that January day in 1809.

Nevertheless, the British easily held off the French while three hundred troopships finally sailed into Corunna harbour to collect them. And to the sound of musket fire to the end the British army embarked for home.

If figures tell a story, it is noteworthy that four thousand Britons died during the suffering and privations of the retreat to Corunna. In the actual battle the loss was eight hundred men, against three thousand French.

OUR COLOUR CAMERA FINDS OUT HOW THEY MAKE . . .

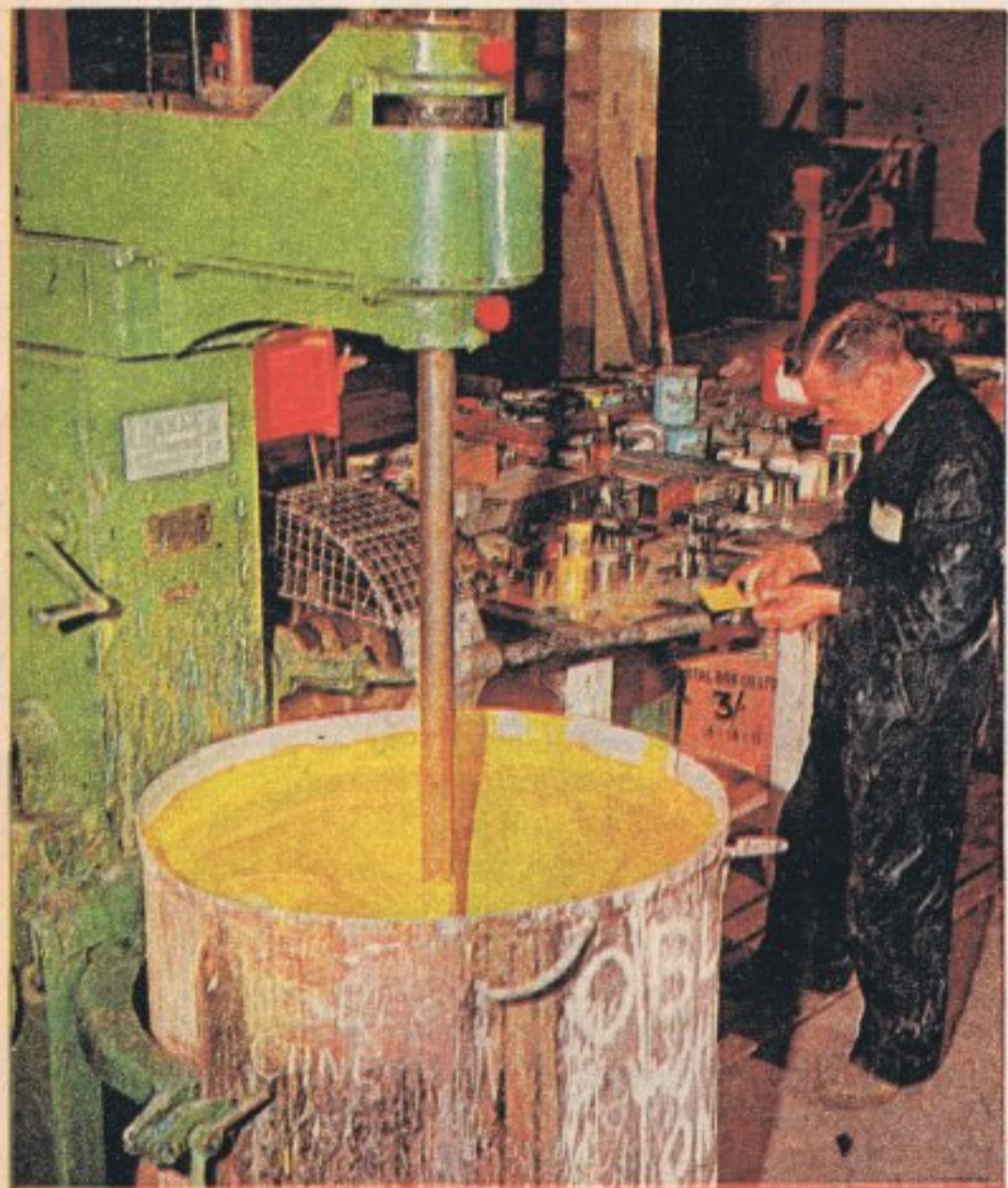
WET PAINT!

UNTIL just before the first World War you could never walk into a shop and ask for a pint of coloured paint! You had to ask for a tin of colouring pigments and a tin of paint base, and then you had to mix the two together for yourself. This meant that matching colours was a tricky business. Today, however, the paint industry supplies us with every variety of ready-mixed paints in over a hundred different colours, so that a perfect match is ensured.

Every paint consists of three things: *pigments*, which give the paint its colour; *resin*, a sticky substance which holds the pigments together and which makes the paint able to stand up to bad weather; and a *solvent*, a solution that allows the paint to be brushed on to a wall smoothly and easily. The solvent evaporates out of the paint when the paint dries. At Blundell Spence paint factory in Hull we watched these three ingredients being mixed together to make paint.



The pigments, which are obtained from a supplier, and the synthetic resins, which are made in the factory, are ground together by a "pugging mill." The right quantities of pigments needed to make a particular colour are worked out in the factory's laboratories.



The solvent is added to the paste from the pugging mills, and the paint is then tested for its colour. A sample is painted on a piece of glass and compared with a sample of the correct colour which is on another piece of glass (left). The matching is done by eye and requires great skill (above). Pigments are then added to lighten or darken the paint.



All the paints have to be tested very carefully to see how well they stand up to the weather. A sample of the paint is brushed on to a panel, and placed in a "weatherometer." The panel is then subjected to intense ultraviolet light (which is equivalent to sunlight) and rain. Tiles are also exposed to the natural atmosphere on the roof of the factory.



To measure stickiness a blob of paint is placed on a metal surface (above the girl's left hand) and then ground by a revolving screw. The resistance the screw meets to its spin measures stickiness.



When all the reports on the paint are complete, the paint is ready to be emptied from the huge vats into the tins. Here the filling is done by hand (left and above). The tins are then taken to the packaging department and from there they are dispatched to customers all over the world.

WONDERS OF NATURE

Descended from the dinosaurs through millions of years, lizards are the oldest four-footed creatures in the world

MONSTERS IN MINIATURE

OF all four-footed creatures, the lizard has the longest ancestry. It is a direct descendant of the gigantic dinosaurs which roamed the earth millions of years before man appeared.

But these prehistoric reptiles were too big to survive and gradually shrank in size until today there is no lizard longer than twelve feet.

Lizards belong to a huge family of reptiles called by zoologists *Lacertilia*, which comes from *Lacerta*—Latin for "lizard."

There are about 2,500 different kinds of lizards, ranging in size from the twelve-foot monitors of Komodo Island, Indonesia, to the three-inch midgets we find in gardens in this country.

With the exception of the Arctic and the Antarctic, there are few parts of the world to which lizards are not native. But the larger and more colourful species belong to the tropics.

This is because lizards are cold-blooded creatures. As the temperature of their bodies has to change with their surroundings, they cannot stand any great degree of cold.

The habits of lizards are as different as their shapes and sizes. Some live in trees, others burrow underground, some live on heathland, yet others spend a great deal of time in the water.

There are crested and spiny-tailed lizards. Some cannot live far from water, while others,

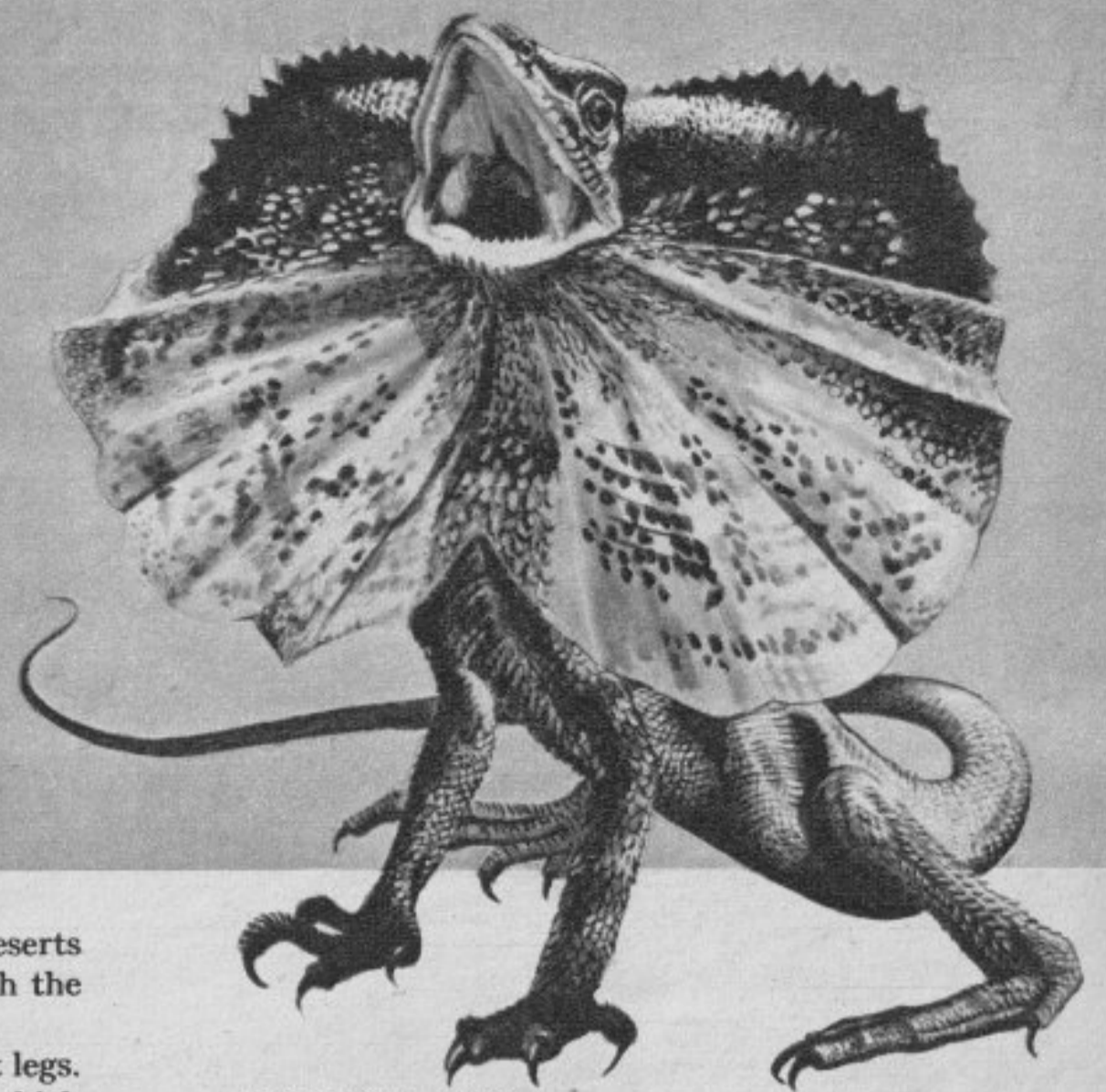
such as the Australian moloch, live in deserts and absorb moisture into their body through the skin, much as blotting paper soaks up ink.

There are eighty species of lizards without legs. An example is the English slow-worm, which because it has eyelids, unlike snakes, is classed as a lizard and not as a snake.

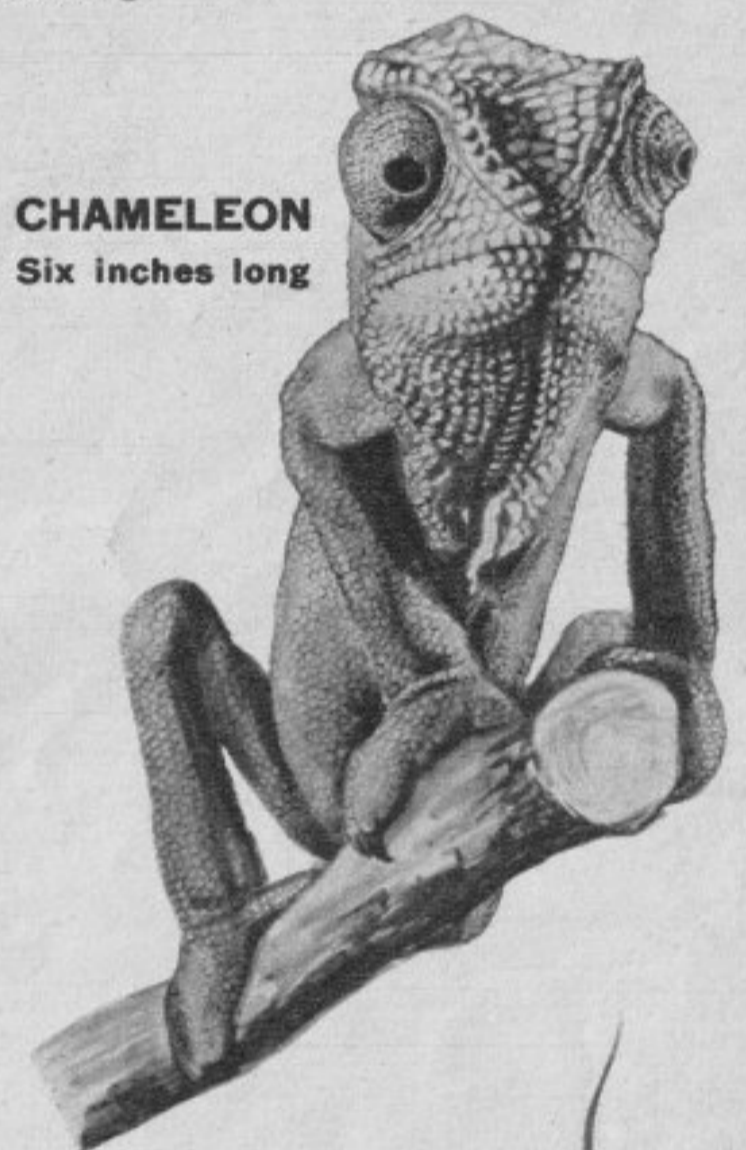
One of the most curious things about lizards is that some species can lose their tails without coming to harm. In fact, if their tail is pulled off they grow a new one.

Most lizards are dumb. The chief exception is the gecko, which "speaks" with a variety of calls, all of which have a sound more or less like that which gives them their name.

Despite their fearsome appearance, only one species is poisonous. That is the Gila, often called the Gila Monster.



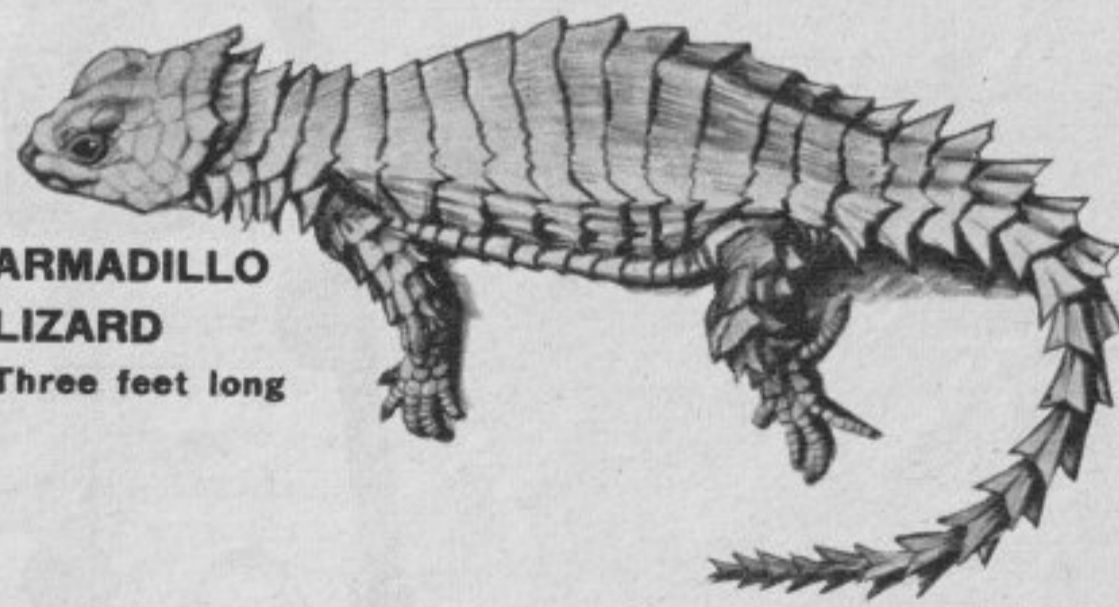
AUSTRALIAN FRILLED LIZARD
Three feet long



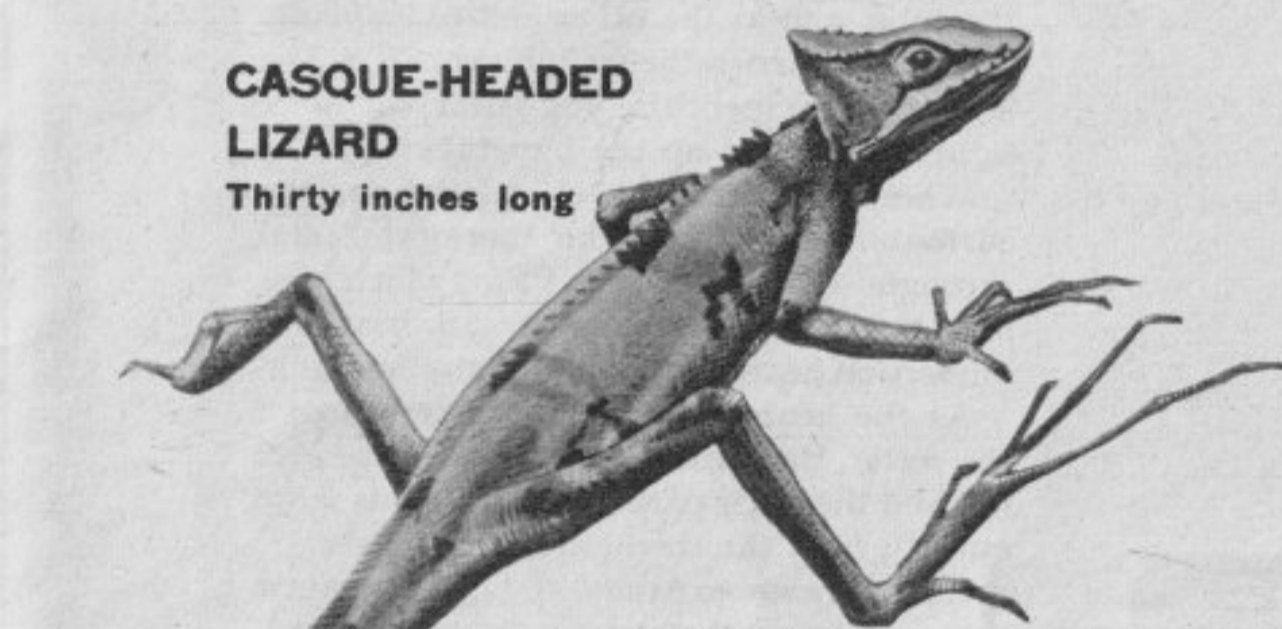
CHAMELEON
Six inches long



LEAF-TAILED GECKO
Five inches long



ARMADILLO LIZARD
Three feet long



CASQUE-HEADED LIZARD
Thirty inches long



INDIAN WATER LIZARD
Eighteen inches long



COAST HORNED TOAD
Six inches long



SKINK
One foot long

HOW IT WORKS— THE THERMOSTAT

The heat of the iron, the coldness of the refrigerator, even the temperature of water in a fish tank, can all be controlled by the action of a thermostat.



DIAL H-O-T

THE thermostat is a switch which can be regulated to control the temperature of any electric heater and will automatically switch the current on or off if the temperature drops or rises.

The diagrams show two different views of the Teddington general-purpose immersion thermostat, used for controlling the temperature of electrically-heated liquids.

Imagine you are going to take a bath and want the water about 100 deg. Fahrenheit. You would first set the thermostat by turning the control knob (A) so that it points to the 100 deg. F. mark on the dial (B).

By turning the knob, you apply tension to (or wind up) the bimetal strip (D) which is a spiral spring made of two metals, normally brass and steel, sealed in a water-tight tube in the water tank.

The bimetal strip is fixed at one end to the tube, and at the other end to a spindle (C), which carries the switch arm (E). The higher the temperature you select, the more tightly you wind up the bimetal strip.

When you turn the electricity on, the current flows around the thermostat and through the contacts (FF), which are closed so that the current can heat the immersion heater in the water storage tank.

As the heater raises the temperature of the water, the bimetal strip in the tube gets hot and the brass part (which expands more quickly than the steel part) gets bigger.

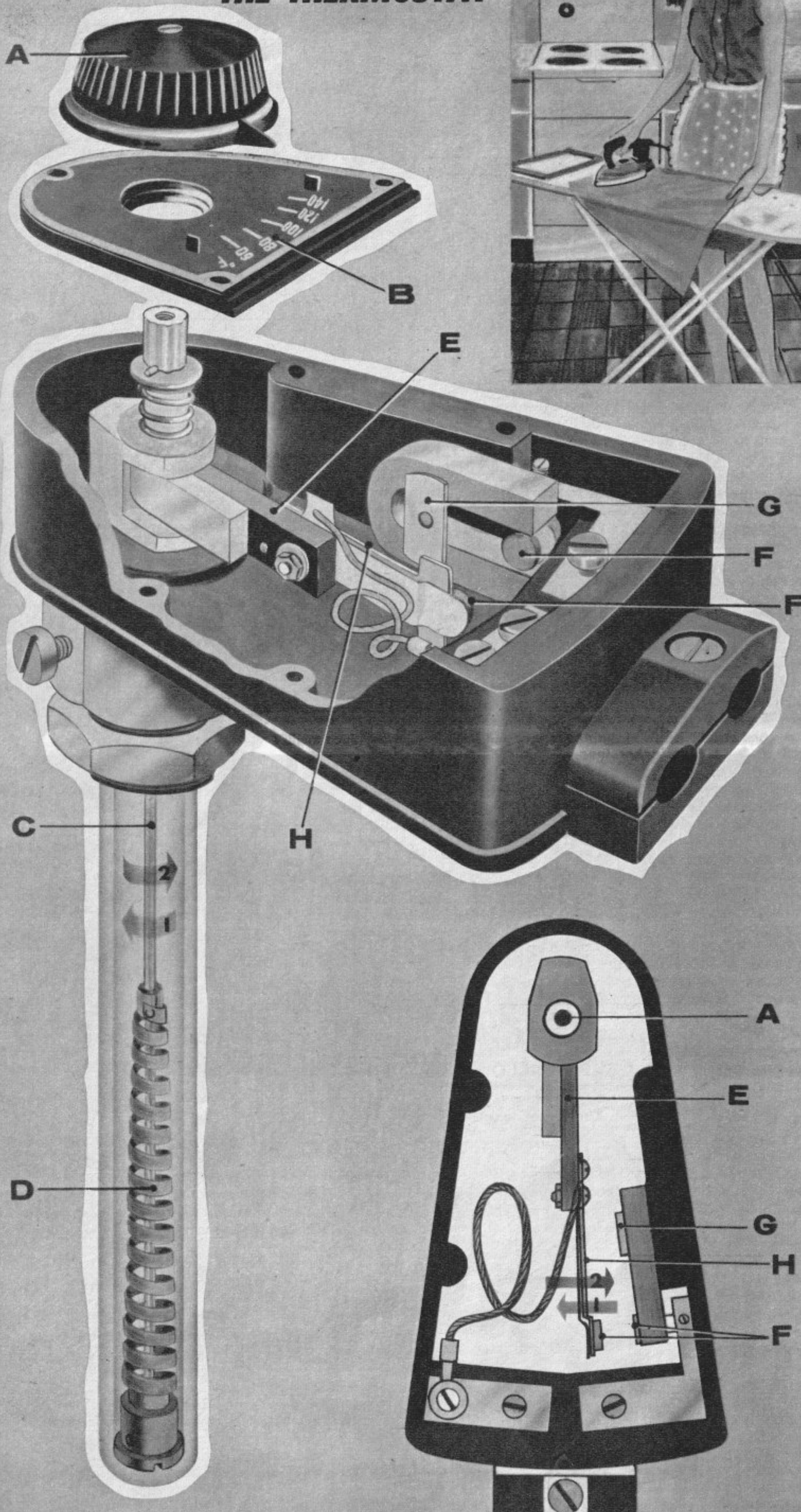
As the brass expands, it pushes against the steel, forces the bimetal strip to unwind, and so rotates the spindle (C).

By the time the water reaches the set temperature, the bimetal strip has rotated the spindle enough to operate the switch arm, which breaks the contacts (FF) and switches off (see arrow 1).

The water temperature is now equal to the heat required, and because the heater has been switched off the water begins to cool. As it cools, so the bimetal strip cools, and, because of this, contracts (gets smaller).

As it retracts, the bimetal strip again rotates the spindle—only this time in the opposite direction, making the switch arm bring the contacts nearer (see arrow 2).

But because two electric contacts coming slowly towards each other are likely to create an "arc" which makes the electricity jump the gap in the form of sparks, a magnet (G) attracts towards it a metal strip (H) on the switch arm, so closing the contacts with a quick action.



LOOK AND LEARN



FOCUS MAN AGAINST ANTARCTICA

PERIL OF THE SNOWS

HUNDREDS of scientists from twelve nations are exploring the wonders of Antarctica's five million square miles. Britain's contribution is through the British Antarctic Survey, which has a hundred men in the Antarctic and is sending out a further eighty this year.

It is not so much what the Antarctic represents today, although that is important, as the insight it gives us into the development of the world over millions of years. Facts about this are learned from fossilized remains found on the frozen continent, and interesting theories are produced about the movement of continents and the shifting of the world on its axis. Twelve nations have signed what is known as the Antarctic Treaty which has the following objects:

- 1 The Antarctic continent shall be used only for peaceful purposes.
- 2 Nuclear explosions and radioactive waste disposal shall be banned.
- 3 No country can claim part of the continent as its own (although seven had done so before the treaty was made).
- 4 Scientists shall work freely and help each other.
- 5 Any country can see the work the others are doing.

Backed by this strong spirit of international co-operation, scientists probe the secrets of the White Continent, and marvel, perhaps, at the spirit and endurance of the men who went before them—men like Shackleton and Scott.

FOCUS

MAN AGAINST ANTARCTICA

continued from previous page

The perils and privations of the Antarctic were experienced to the utmost by the Shackleton expedition of 1914. Their ship, the *Endurance*, was trapped and ground to pieces in the pack ice (see picture below). The main party existed on the ice for four and a half months until Shackleton and five companions made a nightmare journey in a rowing boat to bring help. Right: Shackleton (in broad-brimmed hat) with one of his party.



THE MEN WHO DARED





Left: The year is 1911 and Captain Scott and his companions have landed on Ross Island from which they will begin their journey to the South Pole. All is smiles and optimism, with no sign of the tragedy that is to befall the party.

Below: On the centre pages you can see a map of the whole Antarctic area. Here it is in outline showing the routes taken by the many explorers over nearly two centuries.

FOR centuries explorers who had accepted the challenge of the vast, icy wastes on Antarctica—a land the size of Australia and South Africa put together—paid for their enterprise with suffering, starvation, scurvy, severe frostbite and even death.

In temperatures as low as minus 125 degrees Fahrenheit—colder than that at which mercury freezes—men refused to be defeated. Through roaring, biting, piercing blizzards, they penetrated deep into the unfriendly continent until it was an unknown wilderness no longer.

Mountains, volcanoes, harbours, the mainland and the many islands were charted. The geographical and magnetic poles were discovered, penguins, seals and sea birds were observed and mineral resources examined.

Slowly the hard, ridged snow and smooth, dangerous glaciers, glowing with reflected tints from the sky, yielded to the passage of sledges drawn by men, dogs or Siberian ponies and, finally, modern tractors. But Antarctica has not yielded without a fight. Many brave men died there at the pinnacle of their achievement.

Disappointment

SUCH a man was Captain Robert Falcon Scott who, with four companions, planted the Union Jack at the South Pole in January, 1912, after trudging through the snow and over glaciers with man-hauled sledges. When they reached the Pole, frostbitten and weak with hunger, Scott and his men met with tremendous disappointment.

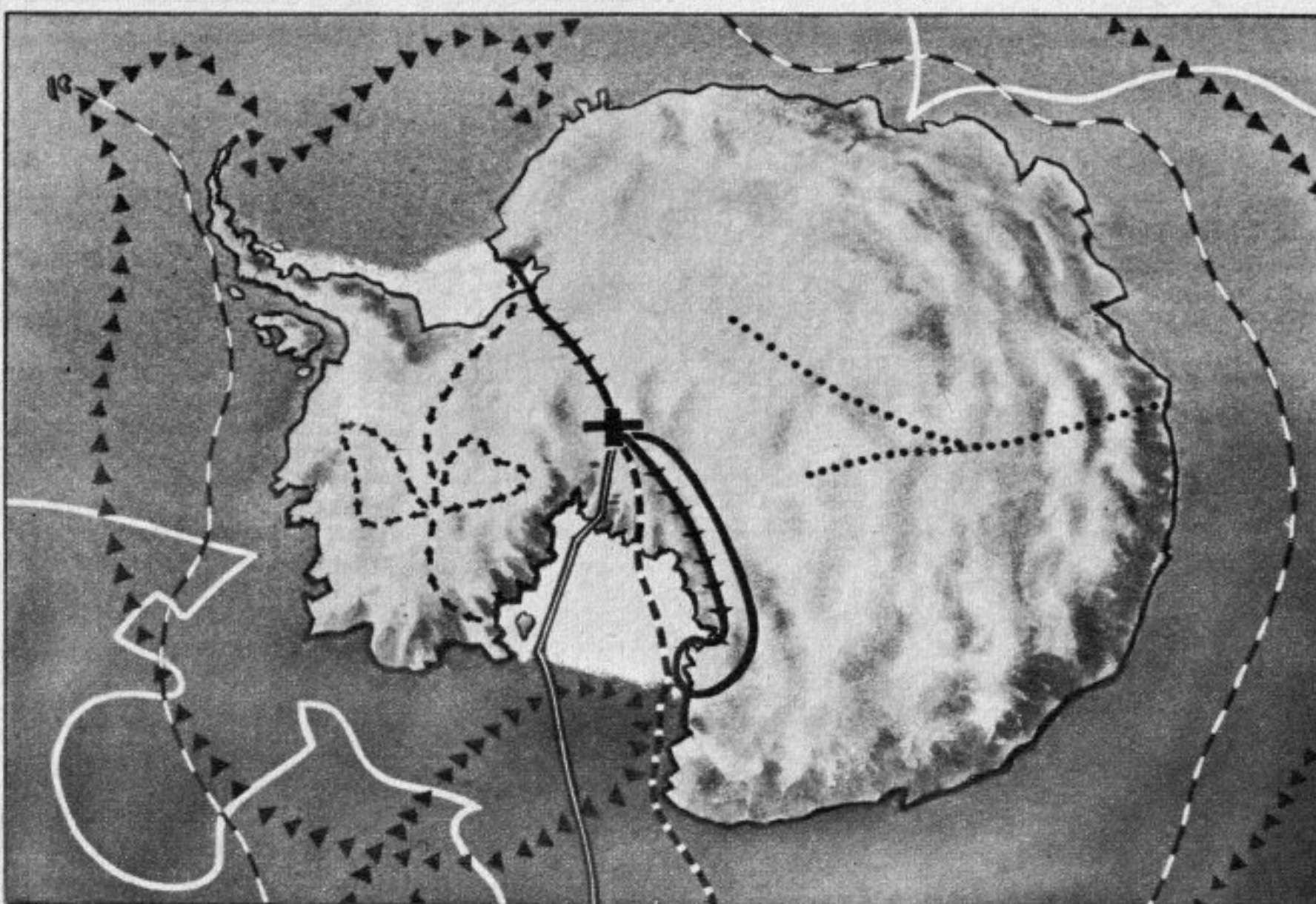
Turned into a black, flickering streak by the powerful, snow-strewn wind was a flag, flying above the remains of a camp, the tracks of sledges and skis and the footprints of many dogs.

Scott knew at once that the Norwegian explorer, Roald Amundsen, with his dog-hauled sledge teams, had reached the Pole ahead of the British party. Amundsen's intention of racing to the Pole before Scott had been kept a close secret until the last minute.

Undaunted, Scott and his men ploughed back through a snowstorm towards their home base. They never reached it. Eleven miles from a depot of food and fuel, they pitched their last camp during the start of a ten-day blizzard. And in their tent, eight months later, a search party found their bodies.

"Had we lived," wrote Scott with faltering, dying hands, "I should have had a tale to tell of the hardihood, endurance and courage of my companions which would have stirred the heart of every Englishman. These rough notes and our dead bodies must tell the tale. . . ."

In 1773 Britain's Captain James Cook became the first man to cross the Antarctic Circle. Sailing through gales, ice and fog he got to within eighty miles of what has since been named Queen Maud Land, and one hundred miles from a giant glacier tongue named



KEY TO ROUTES		AMUNDSEN, 1911-1912	
—	COOK, 1773	—	HILLARY (COMMONWEALTH TRANS-ANTARCTIC FUCHS) EXPEDITION 1957-1958
- - -	BISCOE, 1831-1832	▲▲▲▲	
▶▶▶▶	ROSS, 1840-1843	→→→→	U.S.A., 1957-1960
—	SCOTT, 1910-1913	U.S.S.R., 1957-1960

after Sir Ernest Shackleton, the first explorer to try to reach the South Pole.

Solid ice stopped Cook's progress, and he thought that any land beyond it would be useless. Cook did not see land, but a Russian expedition that set off in 1819, did. Three years later James Weddell, a British skipper, sailed to seventy-four degrees south on water that has been encumbered by pack ice ever since, giving his name to the Weddell Sea that juts into the Continent.

As the explorations continued, the Continent's veil of mystery slipped away. Black mountain summits were spotted by James Biscoe in 1830 and, nine years later, John Balleny found volcanic islands. James Clark Ross led a British expedition in 1840 that sailed through the pack ice and landed on an island. From this, he saw the mainland of bare, rocky cliffs and high mountains, from which the summer snow had slightly receded.

As the Union Jack was being implanted on the island, Ross told the mass of curious penguins that the land was no longer theirs. He was claiming it for Queen Victoria, after whom it was named.

The coming of steamships helped to intensify exploration. An exciting expedition was under-

taken by Captain Scott in 1901 in his ship Discovery, which got through the pack ice in six days and was frozen in near Ross Island. Scott and his men headed south over the ice, but all their dogs died from scurvy and the men had to pull the sledges themselves, returning to their ship after covering about 960 miles in ninety-three days.

The Antarctic had been discovered and penetrated, but now there was a new target—the South Pole, and the search for this developed into a race. Ernest Shackleton was the first man to aim at the Pole. From his hut in McMurdo Sound in 1907 he set off with three companions on manpowered sledges helped by four Siberian ponies. But the terrible conditions were too arduous for the ponies, and the last one was lost down a crevasse. Pulling their own sledges, the men got to within 112 miles of the Pole at a height of nearly ten thousand feet.

Food was running out, and the fear of starvation turned their return journey of 800 miles into a race for survival. But they lived to complete the most stupendous feat of its kind, and Shackleton knew that he would return again to Antarctica, to the eternal ice and snow, to fight once more against the worst conditions on earth.

LOOK AND LEARN



FOCUS ON ANTARCTICA

Man's New Frontier of Conquest



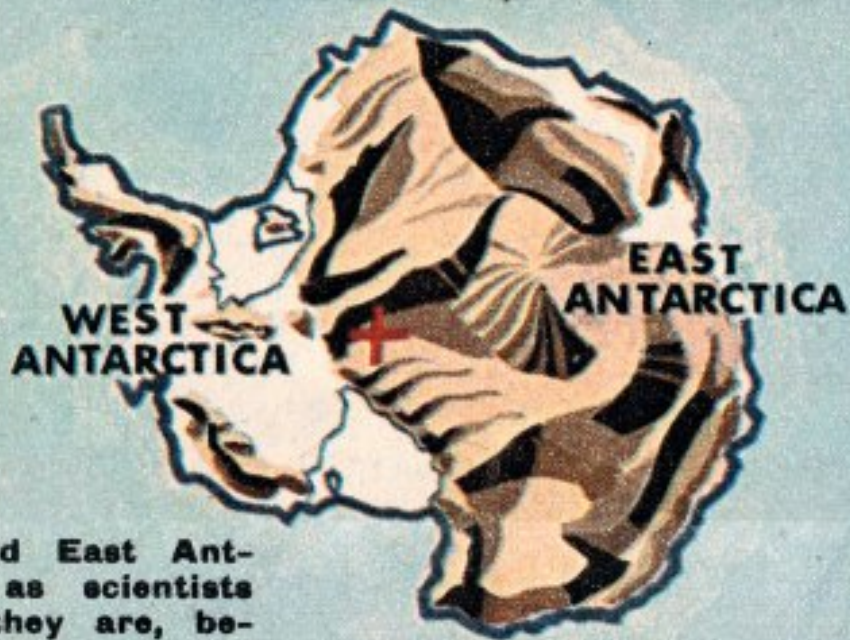
Trinity Land was charted in 1820 by Edward Bransfield, a British explorer. Antarctica's first landing in 1821 was by Capt. John Davis's U.S. sealers.



Sir Ernest Shackleton's British expedition in the ENDURANCE was frozen in the ice here in 1915. His heroism saved the crew.

SUB-GLACIAL ANTARCTICA

The Land Beneath the Ice



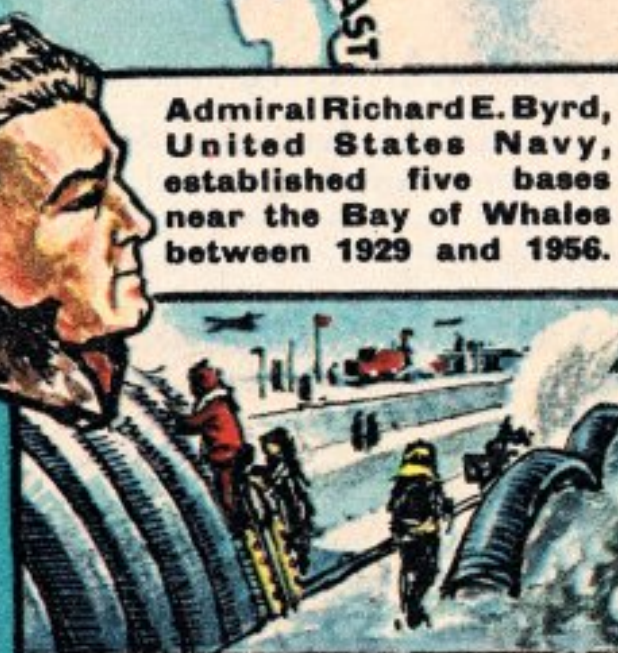
West and East Antarctica, as scientists believe they are, beneath the thick ice that covers them.



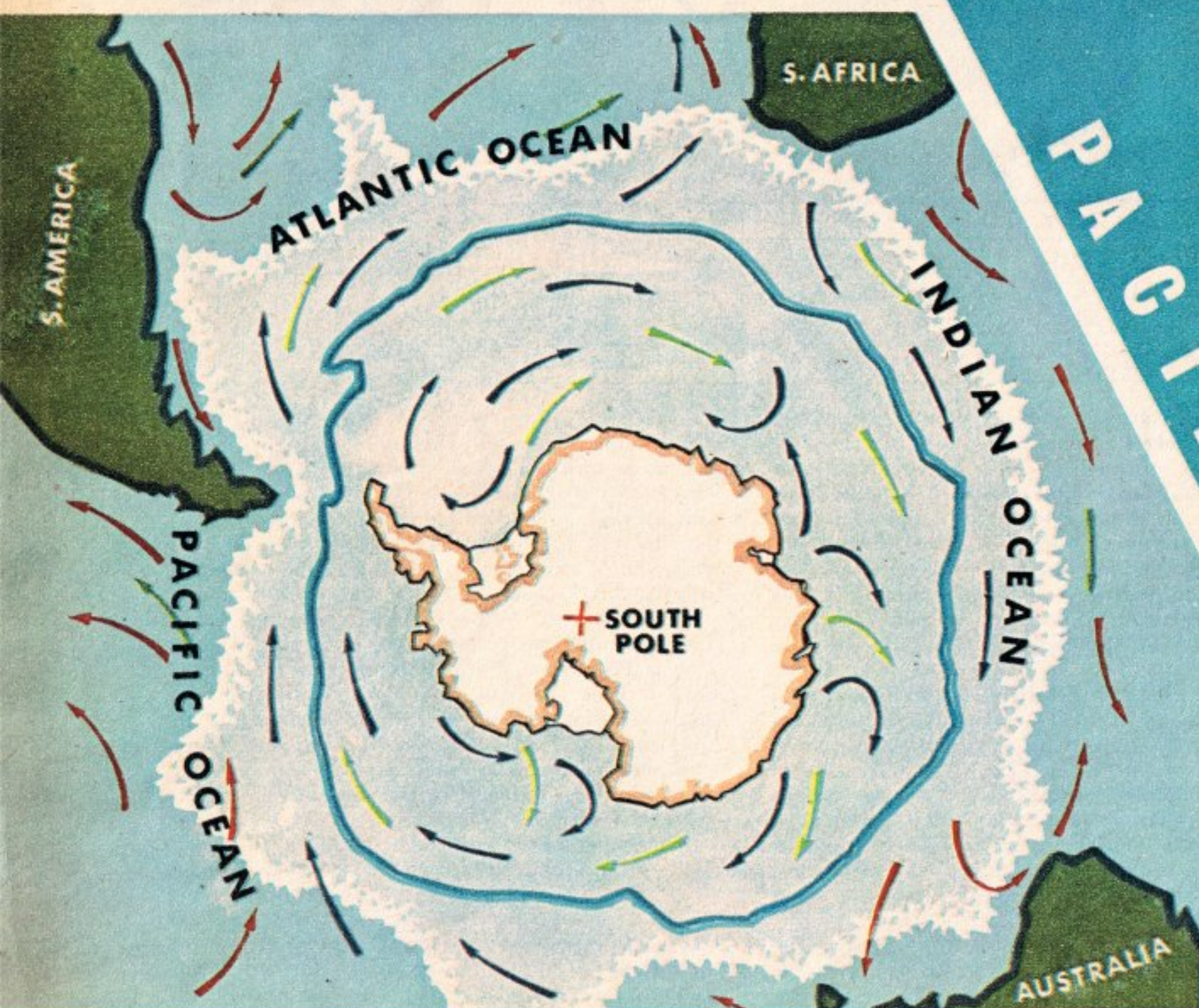
The aeroplane was first used in Antarctic exploration in 1928 when Sir Hubert Wilkins, British explorer, flew from Deception Island in the South Shetlands.



Captain Robert Byrd, British explorer, after reaching the South Pole.



Admiral Richard E. Byrd, United States Navy, established five bases near the Bay of Whales between 1929 and 1956. Americans live and work at Byrd Station in deep trenches roofed with steel. This station, opened in February, 1962, has oil central heating.



	WARM CURRENTS		NORTHERN LIMIT OF DRIFT ICE
	COLD CURRENTS		Northward moving Antarctic and sub-Antarctic waters meet along the Antarctic convergence.
	PREVAILING WINDS		

ATLANTIC OCEAN



Great Britain and Ireland drawn to the same scale, showing Antarctica's vastness.



In 1773, Captain James Cook, a British explorer, was the first man to cross the Antarctic Circle when he sailed round the Continent.



Sir Vivian Fuchs led the British Trans-Antarctic Expedition across the continent by tractor, via the South Pole, in 1958, covering 2,158 miles in ninety-nine days.



Robert Falcon Scott, polar explorer, who died on the Pole in 1912.



Norwegian explorer, Roald Amundsen, who raced to the Pole 35 days ahead of Scott.



Heat and light are provided by a nuclear power plant at the United States' McMurdo Station. It also distills drinking water from the sea.



Sir James Clark Ross found Victoria Land in 1841. An ice shelf he discovered was named after him.

INDIAN OCEAN



Twelve nations—Argentina, Australia, Belgium, Chile, France, Great Britain, Japan, New Zealand, Norway, South Africa, U.S.S.R. and the U.S.A.—have signed a treaty declaring they will work freely and peacefully together in the Antarctica.



Emperor and Adélie penguins breed on the Continent. The Adélie winter on the ice and nest on the coast in summer. Arctic terns fly to Antarctica for the nightless summer.

FOCUS

MAN AGAINST ANTARCTICA

ACROSS THE FROZEN LAND



The toughest Antarctic ice cannot stand up to the hammer blows of the modern ice breaker. This is the U.S. vessel Glacier, which cut a route for Sir Vivian Fuchs's tiny ship Kista Dan in 1960.

MAN'S discovery of the Antarctic, followed by his trek through arduous conditions to the South Pole, still left a further ambition unsatisfied. This was to travel over land from the Weddell Sea (near the South America side) to the Ross Sea 2,000 miles across the continent in the direction of New Zealand.

Two men, more than forty years apart, had this same idea. The first was Sir Ernest Shackleton, leader of the Imperial Trans-Antarctic Expedition in 1914. The second was Sir Vivian Fuchs with his Commonwealth Trans-Antarctic Expedition in 1957.

In many ways, their plans coincided. Shackleton's main party of six men was to land near Vahsel Bay in the Weddell Sea (78 degrees South, 36 degrees West) with seventy dogs.

From almost directly across the continent, at McMurdo Sound in the Ross Sea, a second group was to head for the South Pole, depositing a number of food stores between their base and the Pole.

At the same time, the Weddell Sea explorers were to set out for the South Pole, taking sufficient food with them for their journey. From the Pole to the Ross Sea, a journey which involved passing an enormous glacier, their food would be supplied from stores deposited by the supporting party.

Fuchs's plan was essentially the same. He also proposed to cross from the Weddell Sea to McMurdo Sound and to have a party from the Ross Sea side, led by Sir Edmund Hillary, laying down food depots.

But there was one vital difference. Sir Vivian Fuchs and his expedition would be using dog teams and tracked vehicles, whereas Shackleton and his men hoped to be the first to cross the Antarctic on foot.

But Shackleton's expedition was doomed almost before it started. Both ships were caught in the pack ice of the Antarctic seas, and although the Aurora freed herself after eight months, the Endurance, Shackleton's ship, had to be abandoned.

Forty-three years passed and then, during the International Geophysical Year (July, 1957, until December, 1958), Sir Vivian Fuchs and his Commonwealth Trans-Antarctic Expedition were encamped on part of the frozen Weddell Sea called South Ice. But they were in a vastly



METEOROLOGY At Deception Island in the South Shetlands a balloon is launched to track the course of the winds. Its route will be tracked by a theodolite.



GLACIOLOGY Many scientists in the Antarctic are studying the ice itself, not only on the surface but far below. This special instrument bores into the ice and brings specimens to the surface.



BIOLOGY

better position than Shackleton had been. They had dog teams, tractors, radio communication and an aircraft. On the other side of the continent was Sir Edmund Hillary with his dog teams and tractors.

On Christmas Day, 1957, Fuchs and his party started on their 600-mile journey to the Pole. Eight tracked vehicles, twelve large sledges and a number of smaller ones towed by the vehicles or dog teams carried petrol, oil, tools, explosives (for testing the thickness of the ice), food, scientific equipment and camping gear.

The tractors, travelling at an average speed of 22 miles a day in first or second gear, were using a gallon of petrol to the mile. The expedition crept steadily across the corrugated snow. Vehicles broke down and had to be repaired in driving blizzards, or towed out of crevasses hidden from sight by a thin roof of snow.

Brilliant Planning

AFTER a journey that was a test of endurance, even if it lacked the drama of the old explorations, they reached the South Pole on January 20. There they spent three days resting and overhauling their equipment at a large American station to which men and supplies had been flown. Many newspaper correspondents had been flown in to meet them and to tell the world of their success.

Fuchs and his men had come 900 miles, but they still had a further 1,250 to go to reach the other side of the continent. Hillary advised Fuchs by radio to postpone that part of his journey until the weather conditions, then bad, had improved. But when Fuchs decided to continue, Hillary became his guide towards the end of the expedition.

Compared with the excitements of earlier explorers, who were probing into the unknown, this expedition was a brilliant example of planning and leadership. Fuchs, with the advantage of air reconnaissance, reached Scott base at McMurdo Sound after an amazingly successful journey which took his expedition across the entire continent of 2,158 miles in 99 days.

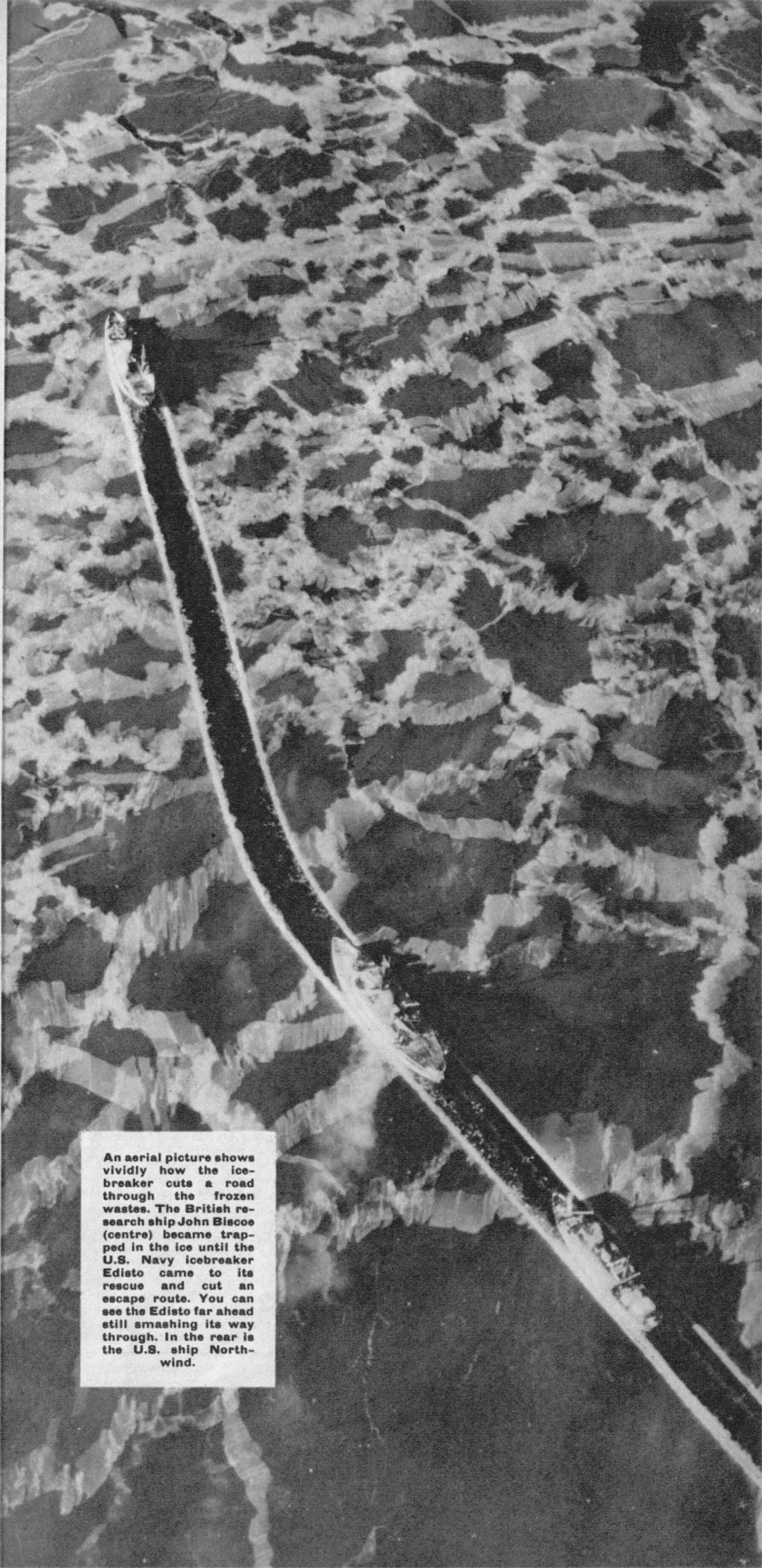
Throughout the journey his scientists were busy taking soundings to discover the depth of the ice, learning all they could from its formation and composition, and studying the terrain as thoroughly as possible. So demanding was this work, that the men only had a few hours sleep each day.

But, by crossing the Antarctic by land, they had learnt far more than it would ever be remotely possible to assess from the air.



What life, if any, exists under the ice? Curiosity over this is aroused by the fact that in regions like Lake Bonney, water beneath the ice has been found to have a temperature as high as 72 degrees Fahrenheit.

Photo: United States Information Service.



An aerial picture shows vividly how the ice-breaker cuts a road through the frozen wastes. The British research ship John Biscoe (centre) became trapped in the ice until the U.S. Navy icebreaker Edisto came to its rescue and cut an escape route. You can see the Edisto far ahead still smashing its way through. In the rear is the U.S. ship Northwind.

FOCUS

MAN AGAINST ANTARCTICA

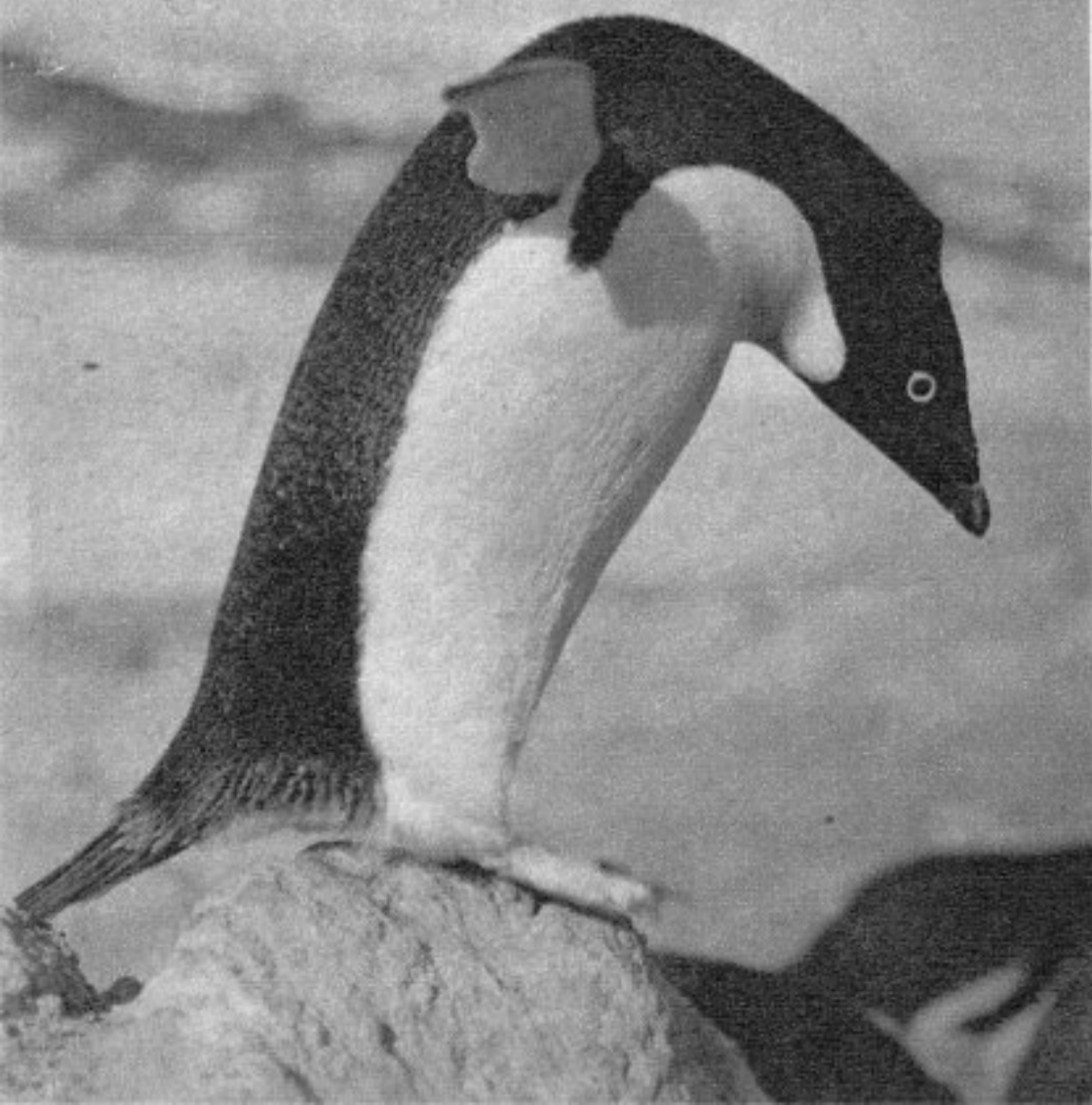
To see an A.A. Distance Indicator like this you would have to travel to the New Zealand Base in the McMurdo Sound area of the Antarctic. Nearest place, the South Pole; farthest is Oslo!

Photo: B.A.S.



The skua is an Antarctic species of the brown gull, found in the South Orkneys and South Georgia. Here is its typical wing action as it comes in to land.

No other form of life is as fascinating in the icy regions as the penguin. On the ice it seems to waddle awkwardly and uncertainly, but in the water it is a wonderful swimmer.



SCOTT BASE.

MILEAGES TO	
WELLINGTON 2 536	SOUTH POLE 841
LONDON 10 588	WASHINGTON 9 214
MOSCOW 10 501	TOKIO 7 529
CANBERRA 2 987	CAPETOWN 4 603
BUENOS AIRES 4 449	SANTIAGO 7 300
PARIS 10 382	BRUSSELS 10 526
OSLO 11 085	

SKY ROBBERS

Angry penguins are helpless as skuas dive from the blue and steal whole families

HAVE you ever, in a fanciful moment, looked up at the sky and wished that you could fly? If so, you must have been experiencing a similar wish of the Adélie penguins of Antarctica, millions of whom live in this icy land. Their natural enemy is the skua gull, who swoops down at nesting time to steal penguin eggs or chicks.

The young are born before the arrival of the Antarctic summer and are able to look after themselves by the winter.

If they survive they have escaped the deadly dives of the 2-foot long Skua gulls, the only flying birds that breed in the Antarctic. Their colouring is a variety of brown, ranging from a breast of light fawn to wing and tail feathers of deep brown.

Skuas are predators—they will rob the nests of others, even of their own kind. They swarm around the penguin rookeries at nesting time, stealing eggs and chicks, and will even squabble among themselves over the carcass of a penguin until it has frozen too hard to be of use to any of them.

Seals abound in the Antarctic seas. There is the rare Ross seal who lives in the pack ice, a home also chosen by the Crab Eater seal—with a silvery coat—who also enjoys shrimps. More familiar in this continent is the fish-eating Weddell seal. He has a black and silvery grey coat, weighs 800 pounds and may be up to 10 feet long. After their October birth on ice, a rookery of Weddell seal pups sounds like a large number of crying babies.

Another local inhabitant is the Sea Leopard that catches penguins and fish. When lying on the ice, it looks like a short, outsize serpent. One of these, 12 feet long, was found to have a dozen penguins in its stomach. The largest of the seals is the 20-foot long Sea Elephant, weighing 3 tons, although each of his thirty or forty "wives" is only half his size.

Harmless to his fellow creatures, except the shrimps on which he feeds, is the Blue Whale, over 100 feet long and the largest of the warm-blooded animals in these waters. Its cousin is the Killer Whale, often no longer than 20 feet, which eats seals and porpoises in large numbers.

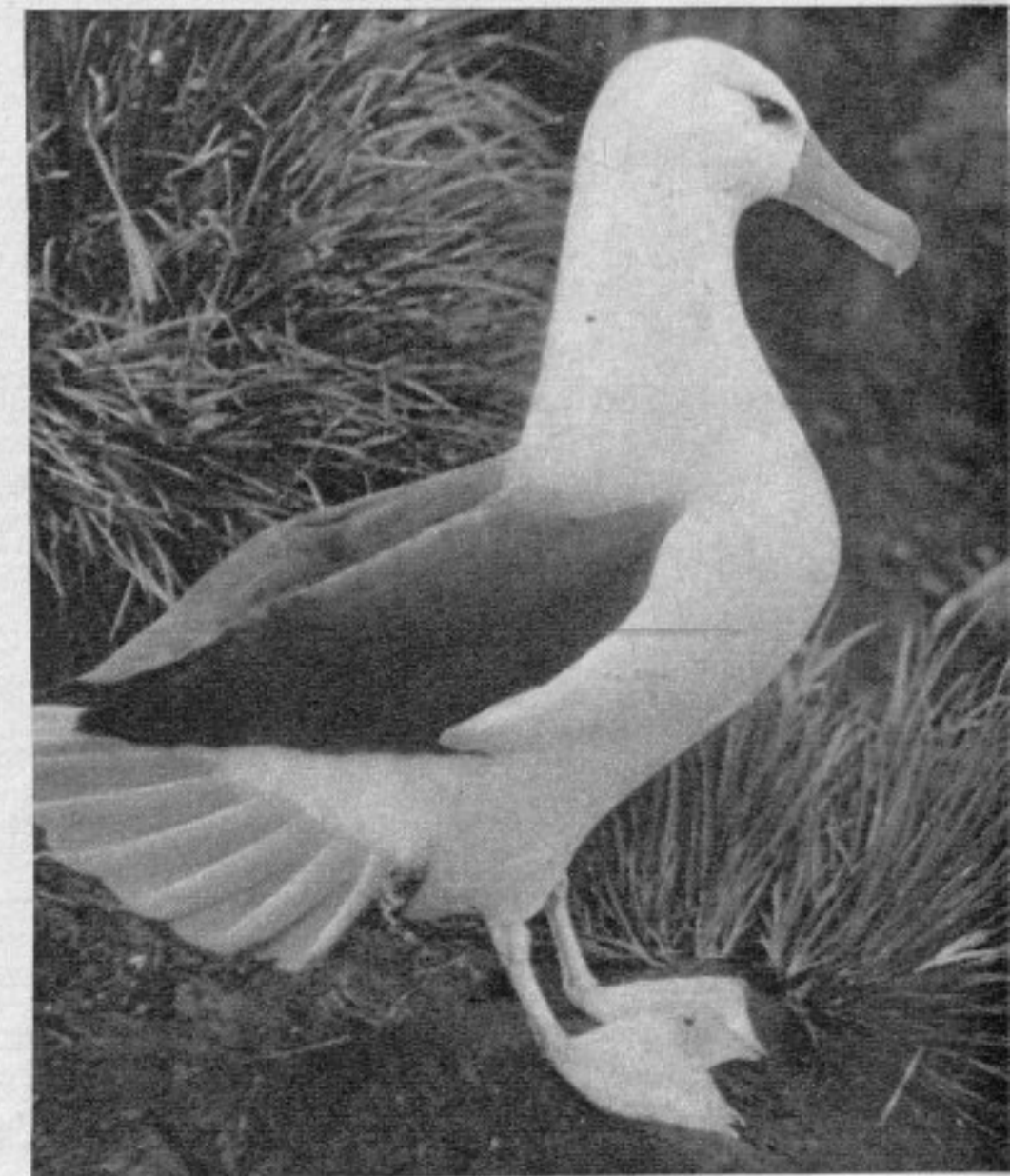
Often Killer Whales swim under loose ice and rock it to frighten the seals into the water. On one expedition, Killer Whales added two ponies to their diet, grabbing them as the expedition was crossing ice floes.

Whale hunters operate in these waters with their floating factories, on which the whale meat is canned and the oil and blubber treated as soon as it is hauled on board. The total value of their catches is more than £3 million a year.



Photo: B.A.S.

With hands and feet fully webbed, and body tapered from the shoulders, the seal is fully adapted for life in the sea, and its long hair offers protection from the cold.



Like a masterpiece of sculpture, the albatross shows its graceful outline, wings and tail. It is the largest of marine birds.

TEAMWORK!

by ALAN OLIVER
Britain's Famous Show Jumper

Dust flying from the wheels of the guns and limbers, the teams of the King's Troop, Royal Horse Artillery, practise their Musical Drive in Regent's Park.



Magnificent horses with gleaming field-guns thundering round the arena, polo ponies dashing down the field—what is the connection? The answer is—co-operation

THE Royal Horse Artillery was raised to provide artillery support that was highly mobile, in order to keep up with the cavalry. They came into being in 1793, and quickly and deservedly earned themselves the nick-name of "The Galloping Gunners."

In 1939 the regiment made the inevitable switch from horses to armour, but in 1946 a Riding Troop was re-formed at the request of the King, who inspected the Army's newest horse unit a year later, honouring them by renaming the troop "The King's."

On parade they make a colourful sight. Their uniform is blue, with slashes of scarlet on the breeches, and lines of gold cord on the jacket front.

There are six guns, each drawn by a team of six horses. The function of the troop is ceremonial—they fire salutes, provide mounted escorts, and are renowned for their Musical Drive, a display of skill given by the gun teams at the gallop.

To each gun team there are three men, mounted on the nearside (left) horses, and a detachment of three more ride behind.

The teams sweep into the arena, traces jingling and gun-wheels rumbling, to give their spectacular drive, culminating in a "scissors." In this dangerous and exciting movement the teams gallop diagonally across the arena, criss-crossing in the centre.

The riders in each team control the offside horses with touches of the whip, which is also used by the leader to signal various commands. Teamwork is vital, for the slightest error can lead to disaster.

Teamwork, always teamwork. That is what counts. A man and his horse must be a team in themselves. The greatest test is when man and

horse are themselves part of a team—on the polo field.

Polo, dignified yet exciting, is a sport which has grown tremendously in popularity since the war.

The game is played on a 300-yard long ground. Each team has four players—two forwards, a centre-half, and a back. These positions are not allocated to any one player—each member of the team plays at the position which the state of the game at any moment may dictate. For example, if a man at back gallops up field with the ball, he becomes a forward; someone else becomes back.

The teams line up in the centre of the ground and one of the two mounted umpires throws in the ball. The teams change ends as soon as a goal is scored, or if there is no score, at half time.

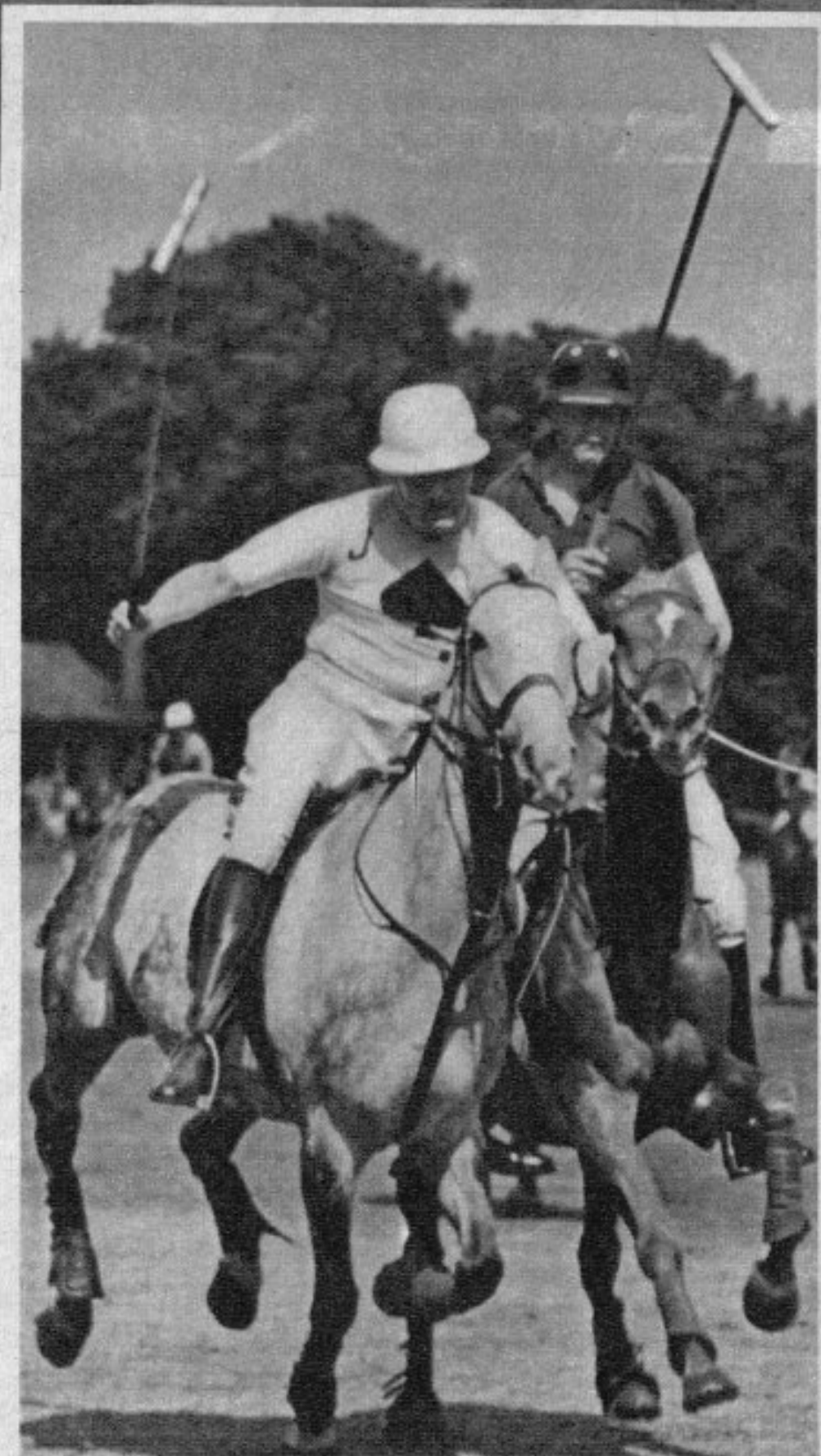
Ideally, a player mounts a fresh pony for each chukka (there are usually 4-6 chukkas, or periods, each 7½ minutes long). Polo ponies must be very fast and able to turn on a sixpence.

When a player is hitting down the field "on the line of the ball," he has right of way. To stop him players of the opposing team may try to hook his polo stick with their own sticks, or ride alongside the man with the ball, flank to flank, so that his pony is forced away from the ball.

Players are handicapped from -2 to 10 (10 indicates a crack player, of which there are probably less than five in the world).

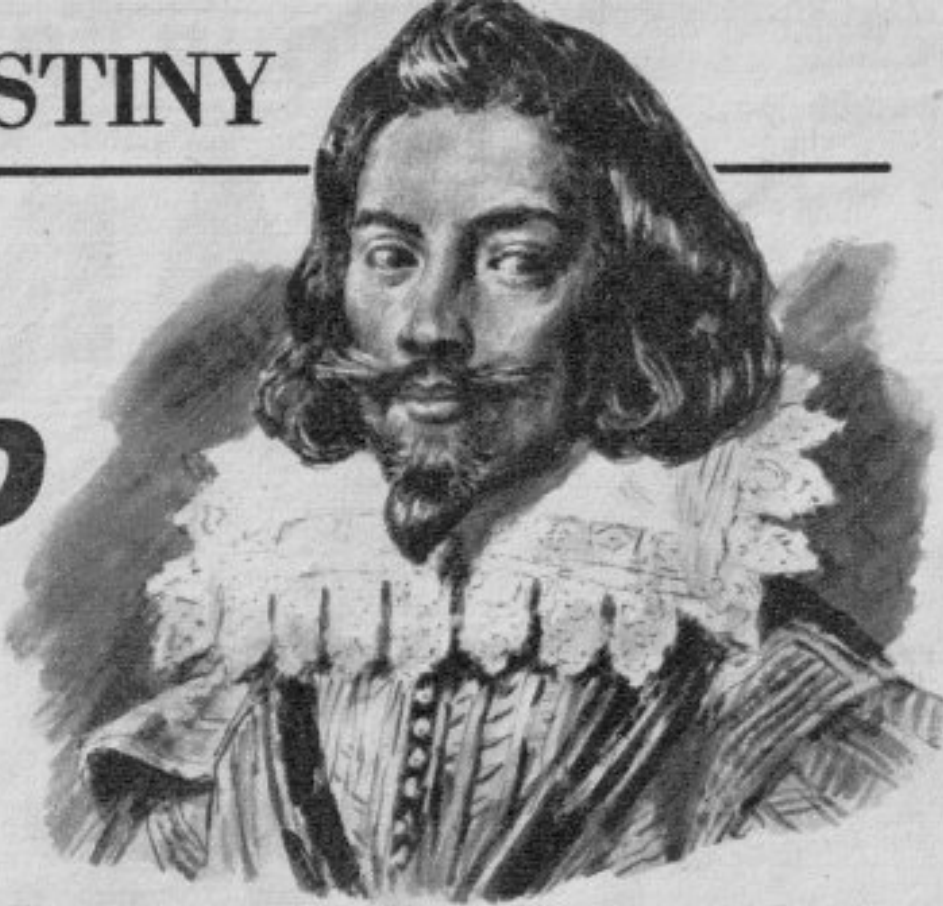
Polo is one of the fastest games in the world, and one of the most exciting to watch. A player must be fast of thought and quick in action. He must be a skilled rider, and at the same time have an "eye for the ball."

To those who play polo, the game is a great challenge—to those who watch it, it is exciting and graceful. Long may polo be played!



Tussle between riders: On the right a polo player is "riding off" (forcing away from the ball) his opponent in the white helmet. How long have men been playing polo? The first recorded game took place in Persia about 600 B.C., with goal-posts made of stone. It was not until the nineteenth century that polo was played in Britain, introduced by cavalry regiments from India. Today goal-posts are made of papiermâché.

THE MADCAP CAREER OF DANDY GEORGE



Two English kings were spellbound by the charm of George Villiers. As a result Villiers, "an amazingly ignorant man," was allowed to plan wars, make speeches, and insult foreign royalty just as he pleased

WHEN George Villiers was twenty-two years old he had an income of £1 a week. Two years later it was £300 a week. In those two years Villiers, "an amazingly ignorant man" as he has been called, yet a dashing handsome fellow, had become a darling of fortune, the favourite of King James I.

In those two years, too, the great essayist Francis Bacon wrote to Villiers: "You are a new risen star: let not your own negligence make you fall like a meteor."

Sound advice—and if only Villiers could have profited from it! Instead, supported by no other ability than his good looks, he embarked upon a career of adventurous roguery that won him wealth for which he was poorly suited, notoriety which made him hated—and a terrible death at the point of a dagger.

Villiers was born at Brooksby in Leicestershire in 1592, and was a man of extraordinary charm; tall, slender, with a pointed beard, flashing eyes and a wonderful complexion. Courageous, gallant and just, he was nonetheless completely unskilled in politics—a fact which did not deter him from laying down the law in conversation that sparkled with wit and character.

Clearly, if such a man were ever to meet up with one of the vain, self-confident Stuart Kings of England he was destined for fame. Villiers, to his own everlasting good fortune, met King James I at Newmarket in August, 1614. Quickly, and inevitably, he impressed the King and was appointed a royal cupbearer.

Lord High Admiral

BY the following May Villiers had been promoted, knighted and had won the King's firm affection. And a year later he was an earl, worth £15,000 a year. Indeed, it became evident to James's astonished courtiers that no gift was thought to be too big by James to give this genial, radiant young man: Lord High Admiral, Chief Justice of the Parks and Forests south of the Trent, Master of the King's Bench office and Constable of Windsor Castle were among the titles quickly heaped on Dandy George.

In a spirit of true roguery, Villiers used his influence with the King to interfere with the law, advance his own family, demote people who opposed him, flirt outrageously with the noblewomen at the court—and even boasted that he was "Parliament-proof!"

Then came a strange adventure that shows off his character. The King was anxious to get his

son, the future Charles I, married to Maria of Spain. Accordingly, Villiers and Prince Charles set out as ordinary travellers for Spain: an opportune moment for Villiers to leave England, for he was already becoming most unpopular.

In Spain the Prince and his companion were received with the highest honours, so high indeed that King James wrote to them: "The newes of youre gloriouse reception thaire makes me afrayed that ye both miskenne your old dade hereafter"—the last part of which suggests that the King was worried that the Prince might forget his old Dad!

But like so many things in which Villiers had a hand, the mission was unsuccessful, partly because both sides disagreed about the marriage terms and partly because the two envoys did not make themselves liked. The Spanish certainly did not like Villiers's familiarity with his Prince—they did not understand a nobleman who sat on a table and talked to his prince in shirt-sleeves.

Villiers, having failed, became bitterly opposed to the Spanish marriage. King James did not seem to mind a bit, however, for when Villiers returned to England the King embraced him—and then made him the Duke of Buckingham.

The new Duke's new plans were for a war with Spain and for Prince Charles now to marry a French princess. The marriage came after James

died, on March 27, 1625, leaving his successor still under the domination of the favourite. But during the wedding preparations in France Villiers managed to insult the French King and Queen, with the result that his visit to France was as damaging as had been that of his journey to Spain.

Villiers returned to England and his plans for war, and since he was Lord High Admiral he thought it was time he gave some attention to the Fleet. Parliament, however, was thoroughly dissatisfied with his antics.

In 1626, when his friend Charles went to his Coronation, Villiers offered the King his arm as a support while he mounted the steps of the dais. Charles was heard to say: "I have more need to help you than you have to help me." That same year the Commons demanded Villiers's dismissal, whereupon the King promptly dissolved Parliament.

Conspicuous Gallantry

AS English relations with France worsened it was decided to send an expedition in support of the French Huguenots (Protestants). In June, 1627, Villiers sailed with six or seven thousand men and landed on the Isle de Rhé. After a vain attempt to storm a French fortress he was forced to retreat. He behaved with conspicuous gallantry, and was the last person to leave the beach, but this little trip cost nearly four thousand casualties, and when in November he landed in England he was well on the way to becoming the most hated man in the kingdom.

It seemed that Villiers would never learn, for he went right on planning attacks on the French. On August 17, 1628, he posted off to Portsmouth to hurry forward his next expedition. The outcry against him in that city was considerable: in the streets an attack was made on him by drunken or mutinous sailors. His doctor, whose name was Lamb, fell a victim to the mob instead, and after that sinister rhymes pursued Dandy George: "Let Charles and George do what they can The Duke shall die like Dr. Lamb."

The events of the next few days were dramatic indeed. On August 22 Villiers was unwell and the King came to see him at the house in which he was lodging at Portsmouth. When the King left Villiers embraced him in a most unusual manner. Early the next morning, just as he had finished breakfast, he came out into the hall of his house. A fanatical naval officer, named Felton, was waiting there, and instantly struck him in the heart with a knife.

George Villiers, Duke of Buckingham, staggered and fell down, saying, "God's wounds, the villain hath killed me!" A few minutes later he was dead.

The naval officer's dagger clattered to the floor—and George Villiers fell to the ground.

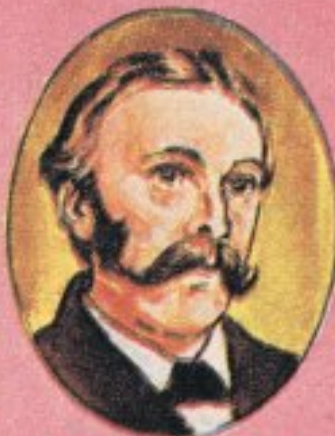


BRITISH PRIME MINISTERS

PART THREE



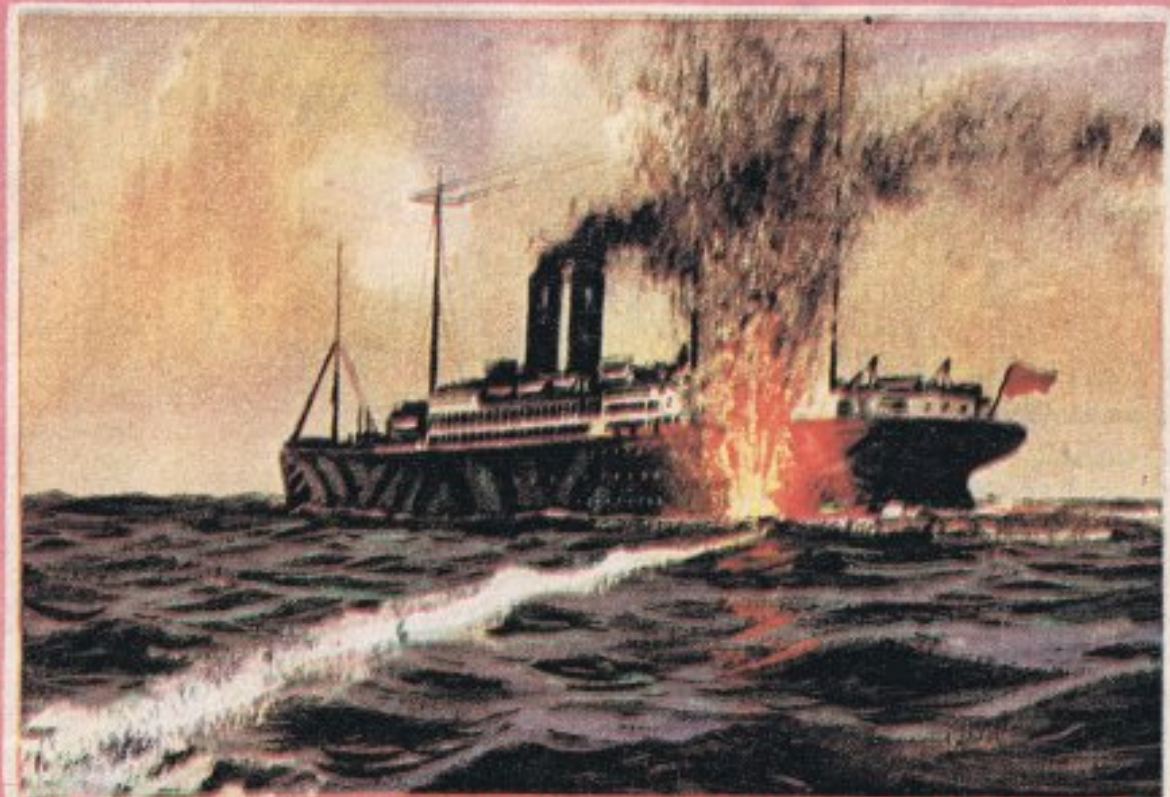
While Lord Salisbury was still Prime Minister, in 1899, the Boer War broke out in South Africa. At this time, this part of Africa was a Crown possession, and British troops were sent to fight the settlers who were demanding self-rule. When the war ended in 1902 Arthur Balfour became Prime Minister. He held the post until 1905, and his successor was Henry Campbell-Bannerman. A Liberal, Campbell-Bannerman had opposed the Boer War, and he gave South Africa self-government.



ARTHUR BALFOUR



HENRY CAMPBELL-BANNERMAN



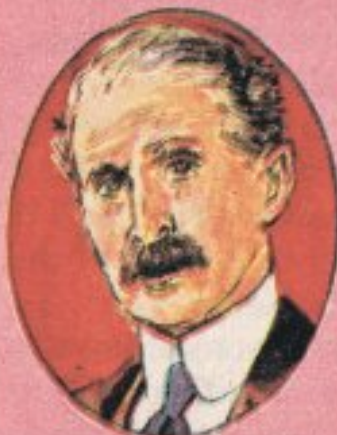
Henry Asquith was Prime Minister during the first two years of the First World War. He took office in 1907, but resigned in December, 1916, when he disagreed with David Lloyd George over war policy. At this time the German submarine war against British shipping was at its height, and Lloyd George became Prime Minister at a desperate time. Without food supplies brought by sea, Britain could be starved into surrender. But eventually Lloyd George, by his strong and outstanding leadership, brought the country to victory.



HENRY ASQUITH



DAVID LLOYD GEORGE



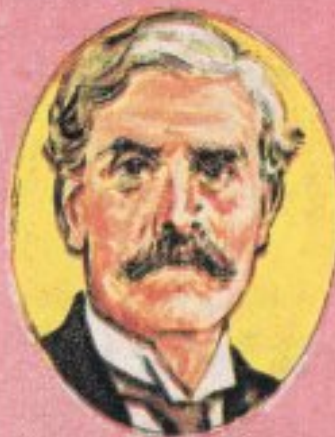
ANDREW BONAR LAW



After the end of the First World War, Lloyd George remained Prime Minister until 1922. He was succeeded by Andrew Bonar Law, a Conservative. Bonar Law, however, was a sick man, and he resigned office for health reasons in May, 1923, leaving the way clear for Stanley Baldwin. Popularly known as "Honest Stan," Baldwin was Prime Minister during the great General Strike of 1926, when the country stood in danger of starvation and ruin due to the stoppage of transport.



STANLEY BALDWIN



JAMES RAMSAY MACDONALD



NEVILLE CHAMBERLAIN



A lonely Scottish crofter's hut was the birthplace of James Ramsay Macdonald, who was twice Prime Minister. During his second term of office thousands of workers demonstrated against redundancy, for at this time, in 1931, there were millions of unemployed. Macdonald was replaced by Baldwin, who in his turn was succeeded in 1937 by Neville Chamberlain. Chamberlain, convinced that he could reason with German dictator Hitler, adopted a policy of appeasement to stop German aggression. But his attempt was in vain, and war broke out on September 3rd, 1939.



The giant of the Second World War was Winston Churchill who was, perhaps, the greatest Prime Minister that Britain has ever had. He took office in 1940, at the time when Britain stood alone, threatened by the might of Germany. Throughout the terror-bombings on London and other cities, Churchill broadcast to the nation and visited the worst-hit areas with his wife. In the year of victory, 1945, he was defeated at the General Election, and the leader of the Labour Party, Clement Attlee, took his place as Prime Minister. But the General Election of 1951 returned Churchill to office.



WINSTON CHURCHILL



CLEMENT ATLEE



A General Election or by-election today is a much more orderly affair than it was a century ago. Big crowds gather at the polling stations to see the rival candidates, but fights, common in earlier times, are rare now. When Churchill retired in 1955 his place was taken by Anthony Eden. Eden resigned in 1957, after the Suez crisis, when Britain tried to prevent Egypt taking control of the Suez canal. Eden's successor was Harold Macmillan, Prime Minister today.



ANTHONY EDEN



HAROLD MACMILLAN

Did You Know That...?

... The Christmas pantomime probably originated from a group of characters called Harlequin, Columbine, Pantaloon and the Clown. These were sixteenth-century Italian comedy characters, who often acted without speaking. This style of comic dancing and miming was called the Harlequinade, in which Harlequin and Columbine were pursued by the Clown and Pantaloon in a slapstick comedy.



JIGSAW THAT MAKES THE BRITISH ISLES



LEICESTERSHIRE

FEW English counties are more typical of England than Leicestershire. It is an agricultural county and a mining county. It is small, yet compact; it is flat and fertile, and it is almost the centre of England.

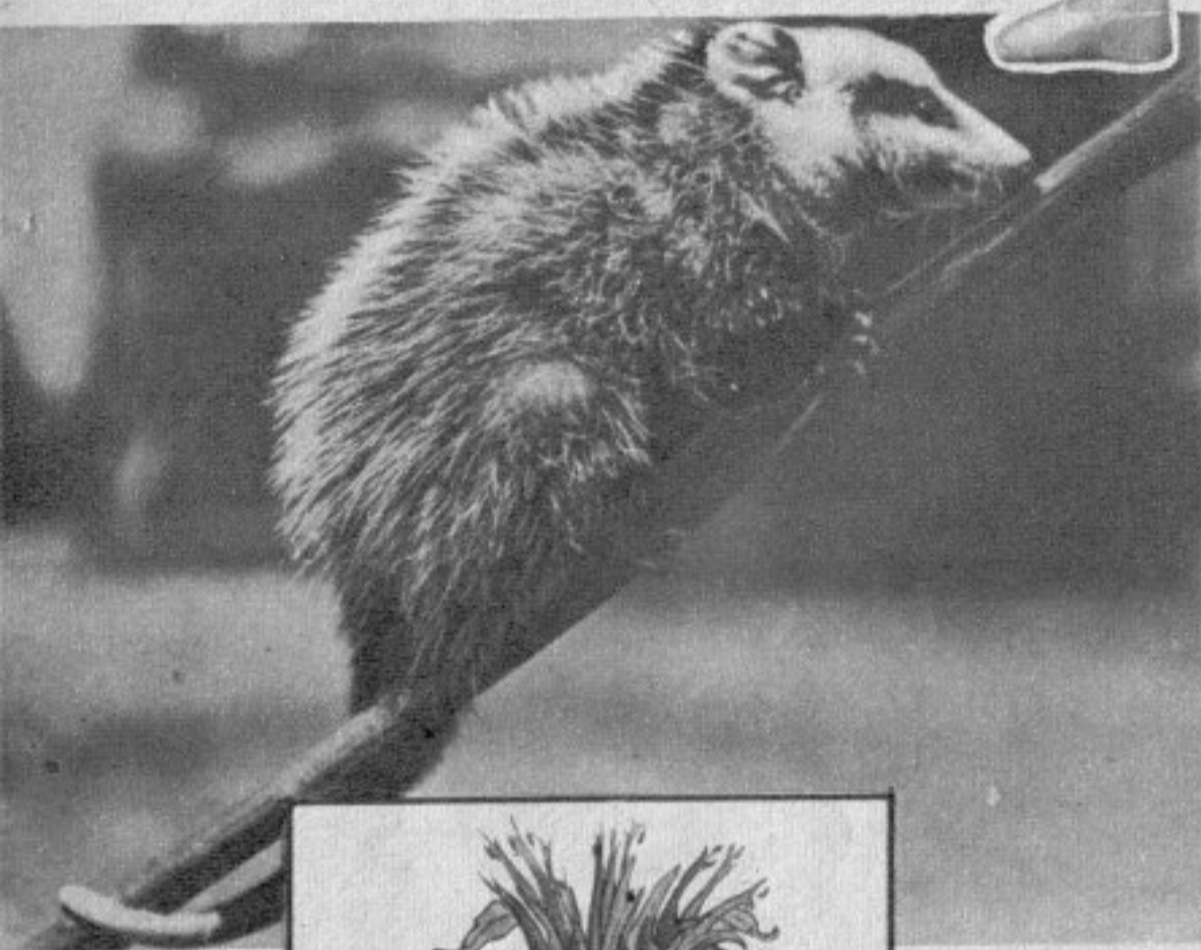
In the west of the county is one of our most famous forests—Charnwood. Eastwards lie the Leicestershire Wolds—a continuation of the limestone ridge of which the Cotswold Hills form a part.

To the north is Loughborough, noted for its technical college (with a famous physical education department) and for its bell foundries.

In the south-east is Bosworth Field where, on August 22, 1485, the last battle in the Wars of the Roses was fought—the battle in which Richard III of the House of York was slain by the army of the Earl of Richmond, who became Henry VII.

Very nearly half the people in the county live in Leicester, the county town and a cathedral city since 1926. Boots, shoes and hosiery are made there, and the boot-and-shoe trade rivals that of Northampton.

During the Civil War Leicester was the scene of many skirmishes between King and Parliament, and as the war progressed the city took the side of Parliament. In 1645 Lord Grey, governor of Leicester for Parliament, received a report on the state of defences of the city from a Colonel Booth.



... "to play possum," or avoid notice, is derived from a trick the American opossum animal uses when surprised by a hunter. It pretends to be dead, keeping quiet to avoid notice. The female opossum often has as many as a dozen babies, each about half an inch long, which live in her pouch until they are six weeks old, when they are the size of a mouse. Then they ride around on their mother's back, using the pouch at bedtime.

Mystery

Picture

Answer on page 26

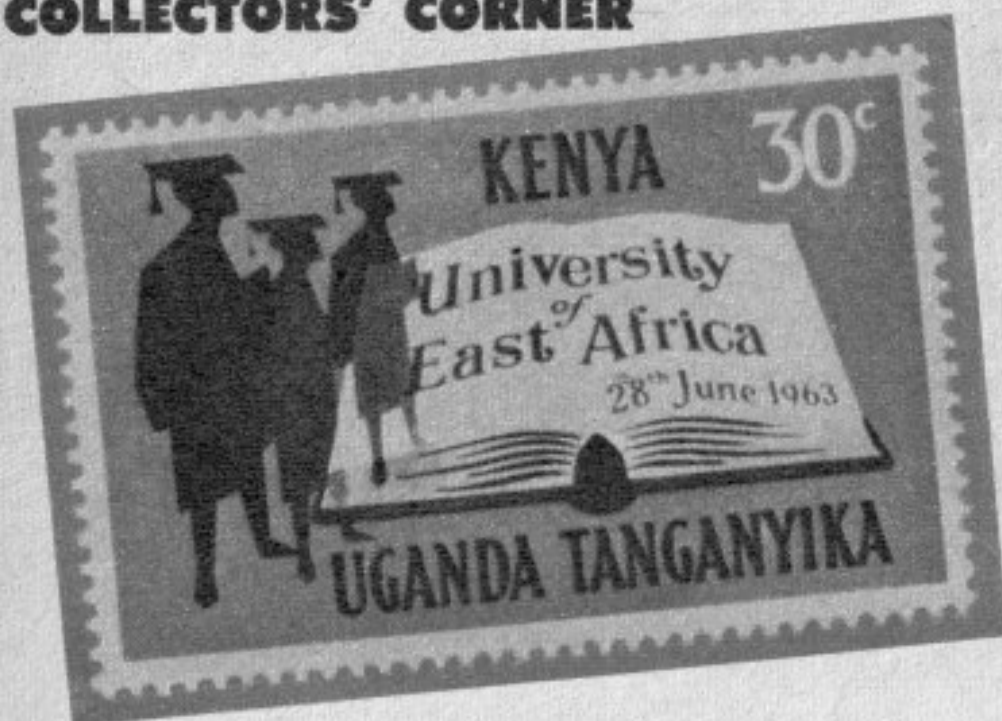


... a famous oil called bergamot used in making perfume does not in fact come from the bergamot flower, but from a type of orange plant. The pink or red bergamot flower, which grows in many of our gardens, has highly-scented leaves which leads people to believe it is the source of the perfume oil.

... there are five kinds of newspapers—national, provincial, Sunday, local, and specialized papers. They have a long history, the first regular newspaper to be printed in England being the *Weekly News* in 1622. The oldest surviving British newspaper started as the *Worcester News Sheet*, in the 1690s and later became the *Burrows Worcester Journal*. Freedom of the press, jealously guarded, was not established until 1855.



COLLECTORS' CORNER



EAST AFRICA'S FIRST UNIVERSITY

ON June 26, 1963, the Federal University of East Africa was opened with President Julius Nyerere of Tanganyika as its first Chancellor. The University comprises the Makerere University College, Uganda; the Royal College, Nairobi, Kenya; and University College, Dar-es-Salaam, Tanganyika.

The three figures on the stamp represent the three colleges about to step on to the "Book of Learning." Of the colleges, Makerere is best known, and is located near Kampala. It was founded in 1922 from the old Uganda Technical College for training artisans. Additional colleges for medicine, agriculture and veterinary studies have since been added. England, Tanganyika, and Uganda contributed approximately half a million pounds to develop the project. The Royal College, Nairobi, was founded in 1924 and included an engineering school. University College, Dar-es-Salaam, was opened in 1961 with a faculty of Law, and Arts and Science faculties are being added.



Prince Rupert surrounded Leicester with Royalist troops and laid siege to the city, as his Cavaliers made minor attacks before the final assault.

THE SHIRE OF THE SHIRES



← The old Grammar School at Market Harborough, built in 1614. Market Harborough, a small market town, became a centre of hunting at the beginning of the century.

It was the colonel's opinion that a force of five hundred men would be able to storm Leicester; furthermore, he saw "discontent dispersing itself fast abroad in this town."

As a result, a large line of defence was constructed around Leicester, but it was too large to be of any practical use; a defence lengthened is a defence weakened.

City Besieged

KING CHARLES, determined to draw the Parliamentarians away from their advance on Oxford, hit on Leicester as an excellent decoy, and made preparations for an attack on the city.

The city corporation were more than worried at the situation which was arising, and hastily started an attempt to raise recruits and armaments. But recruits there were none, and precious few guns, either.

Thus when the King arrived in Leicestershire with nearly 10,000 men and some sixteen guns, he was opposed by a total of 2,000 men in the defended city. And not all of them were by any means spoiling for a fight.

On May 28 the Royalist forces surrounded the city, firing occasional shots at the enemy, who replied as casually.

The Newarke, near the ancient castle of the Earls of Leicester, was the strongest point in the town, defended by a mere 700 men. The rest of the defenders, including townsfolk who had armed themselves hastily with whatever weapons came to hand, were scattered along the lengthy perimeter which had been so hurriedly fortified.

By now the Royalists had surrounded the

town, and on May 30 Prince Rupert, his artillery overlooking the Newarke, demanded the surrender of Leicester to the King. The Committee of Leicester asked for a day in which to consider this proposition; Rupert, aware that a day would give vital time to improve defences, opened fire promptly with his artillery.

At midnight the Royalists stormed the city, and despite a desperate defence by the townspeople (including the womenfolk) Leicester had to yield.

In Leicester today parts of the old Newarke still stand as a reminder of a time when the English fought the English, where even in a town like Leicester one man might turn against his neighbour for a mere matter of principle.

Less Grassland

PRIOR to 1939, less than one seventh of the land was used for growing crops—the rest was given over to what the sporting poet Whyte Melville described as "acres of woodland and oceans of grass."

For hundreds of years agriculture has played an important part in the life of the county. This is still so today, but in the last thirty years a radical change has come over Leicestershire farming.

The grassland has receded rapidly, and now more than half the county's acres come under the plough.

Leicestershire is in the middle of the Shires, the name given to the best hunting country in the Midlands.

The county has been called the Shire of the

Shires—great hunts and famous hunting men have galloped over the never-ending grass or risked their necks at the vast banked fences called oxers for which Leicestershire is well-known.

No less well-known are the names of the great packs that hunt there—the Belvoir, the Fernie, the Atherstone, the Quorn, the Cottesmore and the Pytchley Hunts.

The popularity of these Leicestershire packs, particularly at the end of the last century, brought much wealth to the county, for rich men came to hunt, and stayed to spend their money—particularly on leather goods and boots, for which Leicester is famous.

Industry, too, has its place in Leicestershire. Hinckley, in the extreme south-west, is famous for the manufacture of hosiery, and Melton Mowbray for its pork pies. North-west of Leicester itself lies Coalville, centre of an area where coal and iron are mined, and granite is quarried.

But despite the ever-increasing plough land, and the new factories which slowly encroach on the countryside, to Leicestershire people and to sportsmen everywhere, it is still "The country that none can surpass, with acres of woodland and oceans of grass."



Yorkshireman John Wycliffe chose Leicestershire as the county where, in the 14th century, he translated the Bible from Latin into English for the first time.

STORIES FROM THE BIBLE

by the Rev.
James M. Roe
LOOK & LEARN'S
religious adviser



ELIJAH'S FEARFUL PROPHECY

By false evidence, Ahab had gained possession of Naboth's vineyard.
Now from the prophet of God he heard what his fate was to be

AHAB the king was a man who liked to get his own way, and when one day he saw the delightful vineyard that had been planted right in the shadow of the palace wall, he set his heart on adding it to his own spacious estate.

"It's just the place to make a little herb-garden," he said to himself. "No one has the right to grow grapes under the very window of the royal palace!"

But the owner, a man called Naboth, was perfectly entitled to do what he liked with this pleasant piece of ground, for he had inherited it from his father, and according to the law not even the king could take it away from him. When Ahab offered to buy it at a very attractive price, Naboth firmly refused to sell.

For several days Ahab brooded on this. Noticing his sulky attitude, his wife Jezebel asked him whatever was wrong. As soon as she heard about the little garden, she planned to obtain it, for while Ahab was a weak and envious person, she was a wicked and scheming one.

Calling some worthless followers to her aid, she arranged for Naboth to be falsely accused of speaking evil against the name of God. This was a serious offence, but Jezebel arranged false evidence against him so cleverly that before he could prepare to defend himself he had been condemned to death, in accordance with the law. He was taken out of the city and stoned to death, as the law against blasphemy permitted.

"Well," said Jezebel to the king. "I don't know what you were so upset about. You see how easily these matters can be arranged with a little careful management. Now all you have to do is to take over the garden yourself. Naboth can't stop you—he's dead."

Judgment

RATHER frightened, as well as secretly pleased, Ahab stepped out of his palace and made his way round to the pleasant little garden which he had been so anxious to buy for himself.

As he went, a shadow fell across his path, and looking up he saw Elijah, the prophet of God, looking steadily into his face.

In Ahab's guilty looks Elijah read again what he had already heard, how the innocent Naboth had been falsely condemned in order to satisfy Jezebel's malice and Ahab's greed.

"So you've found me, enemy that you are!" said Ahab, rather shakily.

"Yes, I've found you," replied Elijah, in a voice quiet but angry. "I have come because I know the truth; and now I will pronounce judgment on you!"

Ahab trembled as Elijah continued with these terrible words. "You and your household will be destroyed, as your worthless ancestors were destroyed. As for your wife Jezebel—the dogs that scavenge in the streets will one day eat her carcase by your own city wall."

This was a fearful threat, yet no one deserved it more than this feeble king and his evil queen. And within a few years every word of Elijah's terrible prophecy came true.

THE STORY SO FAR

Kamuelo, a Hawaiian fisherman's son, and his friends, were thrilled when a baby dolphin appeared among the school of dolphins which used to swim offshore. As the children watched the baby grow, they christened her Wiki-Wiki, meaning Hurry-Hurry. Sailing in a canoe with his brother one day, Kamuelo saw the dolphins attacked by killer whales. Wiki's mother was killed, and the young dolphin had to fend for herself. It came as a great shock to Kamuelo and his father when Wiki began to help them to catch fish, and when the boy was saved by the dolphin after he was swept out to sea they became friends. Wiki soon decided that human beings were friendly, and she and Kamuelo often swam together. The boy soon realized that he had won Wiki's trust and affection.

ONE Saturday morning Kamuelo woke at dawn. He hopped up at once, for he was going out in his father's boat with the fishing fleet.

Wiki must have heard the motor starting up; she knew the difference in its sound from that of any other craft. She hurried to join it, leaping and coasting in the billowing spray at the bow. As usual, she helped to chase schools of fish into the nets.

"The fellows in the other boats have been getting jealous," Kamuelo's father said, "because she helps me catch more fish than anybody else."

It was almost as if Wiki belonged to Kamuelo and his family.

SOS, SOS...

THEY were doing so well that they lingered longer in the fishing-grounds than the rest of the fleet. Theirs was the last boat to head for home in the afternoon.

They were only half-way to shore when the motor began to splutter. Kamuelo's father and his several helpers tinkered with it. They tried again and again. But it coughed, wheezed, and finally choked into silence. They could do nothing to make it start.

There was no time to lose, for the barometer was low, the wind had changed, the air was murky, the sun had disappeared. Far off on the horizon the crew could see the slant of rain falling. It was plain that one of the *kona* storms was brooding up from the south.

Kamuelo's father had a small two-way radio on board. He sent out a call on the coastguard wave-length: "SOS... SOS... SOS..."

Close Call

THE crew looked worried. An outgoing tide was carrying the boat farther and farther away from Calabash Cove. They could feel it being pulled by the giant hand of an unseen current. If help did not come soon it might be dragged ashore sideways. Then it would smash against the points of black lava which the volcanoes had spouted up when they formed the island ages ago.

"Do you think help will come before dark?" asked Kamuelo.

"I hope so, sonny," his father replied soberly.

Meanwhile Wiki had been hovering near the boat like a faithful dog. As she swam about, Kamuelo could see

WORD OF THE WEEK

TATTOO

THE tattoo which is a splendid military pageant performed by night has rather humble beginnings. Originally the word meant the beat of a drum, a bugle call, or other signal summoning soldiers back to quarters at nightfall. It came from the Dutch *taptoe*; *tap* corresponded to our own word *tap* or *tap-room*, and *toe* was translated as to in the sense of *shut*. Thus the whole word meant "The tap-room is closed," that is, no more drinks would be served, and so it was time for the soldiers to return to barracks.

In more every-day experience, to beat a tattoo (or the devil's tattoo) is to drum with one's fingers on the table.

The tattoo which is a design marked on a person's skin by pricking in coloured pigment has no connection with the military kind. It comes from a Tahitian word *tatau*. Apparently it was on the Pacific island of Tahiti that this process originated.

ANSWERS TO QUICK QUIZ

(from page 2)

Natural History

(1) All of them. (2) Bright blue. (3) Australia.

Literature

(1) Charles Dickens. (2) The Lake Poets. (3) John Milton.

People

(1) (b) A painter. (2) Ludwig. (3) Hussein.

Sport

(1) Chess. (2) Frank Worrell. (3) (c) Welter.

Words

(1) Sleight of hand. (2) (b) Speech. (3) Fishing.

History

(1) Henry I. (2) Combination Acts. (3) Lord Nelson.

Geography

(1) The Volga. (2) Colombo. (3) Menai Strait.

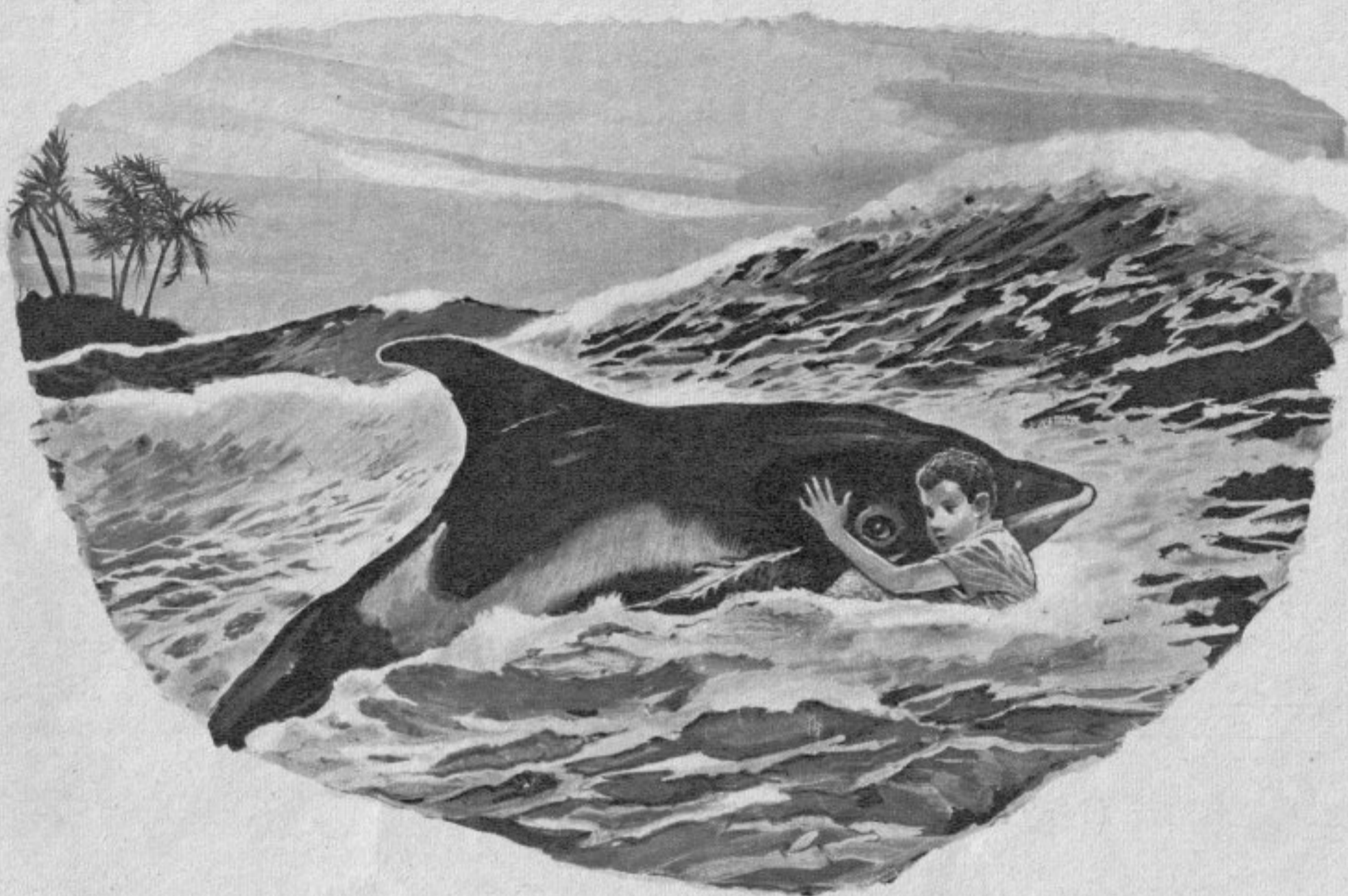
CROSSWORD (from page 8)

ACROSS: 1. Cacti; 4. Horatio; 8. Monster; 9. Spain; 10. Allan; 11. Essence; 12. Setter; 14. Cherry; 18. Jackass; 20. Irons; 22. Delft; 23. Evesham; 24. Endured; 25. Sleek.

DOWN: 1. Compass; 2. Canal; 3. Intense; 4. Hornet; 5. Risks; 6. Trainer; 7. Ounce; 13. Tackled; 15. Heiress; 16. Yashmak; 17. Ostend; 18. Judge; 19. Alter; 21. Ochre.

WIKI IS HEADLINE NEWS

Part Three of
WIKI THE DOLPHIN—
Margaret Mackay's
enchanting story about a
boy's friendship
with a deep-sea animal



"Oh, Wiki!" he gasped. "You know we didn't mean to do you any harm!"

her eyes staring with a puzzled look.

The dark clouds came closer and lower. They turned purplish and then almost black. The rain began to fall. Kamuelo and the men rushed to put on their oilskins and sou'wester hats. The rain slapped their faces. Their lips tasted of salt. Underneath their feet the deck moved up and down.

Once such a big wave crashed over the rail that Kamuelo lost his footing. He sprawled on to his stomach. As the water receded across the deck he was almost washed overboard. But his father grabbed him by the seat of his oilskin and hung on to him until the boat righted itself.

He felt weak.

"Whew!" he said. "That was a very close call."

"You'd better keep out of the way," his father warned.

At last, far off through the grey stripes of the rain, they could see the blurred shape of a vessel.

"Here comes the coastguard!" Kamuelo's father shouted.

The storm made it very hard for the rescue craft to get near the fishing-boat. The two small ships bounced up and down in the hollow between the waves. Sometimes Kamuelo could not even see the other, until it popped up on the swell again.

At length the vessel approached within hailing distance. Its engine was stopped. The fishermen waited, in readiness. Kamuelo's father signalled; and they shot their towline across the gap of wind and rain and waves. Luckily it struck the deck of the other boat. With a yell the coastguard seized it, and worked

madly to make it fast.

At last the line was firm.

"O.K.!" the coastguard skipper shouted to Kamuelo's father. His voice sounded as tiny as a seagull's mew against the wind.

Presently they could hear the other motor starting up again. There was a moment of suspense, but luckily the towline held. With a shuddering jerk their own craft began to move.

"Where's Wiki, I wonder?" asked Kamuelo.

"Don't know," grunted his father, busy with the gear.

As the boy spoke he had ventured

"But we did! I saw it! She was right alongside!"

One of the fishermen had seen the accident too.

"I think maybe she was hit by the propeller, under water!" he shouted.

"Ah, *wei!*" wailed Kamuelo—with the old Hawaiian cry. "I hope—I hope we haven't killed her!"

The tears ran down his face, mingling with the rain that washed them away.

The next morning the storm was over. At the first light Kamuelo ran down to the beach, straining his eyes for any sign of Wiki.

A storm, a trail of blood, and Wiki's absence, told their own story to Kamuelo. Then, out to sea, a head with a beak showed above the water...

towards the side again, facing the cold spray.

He grabbed at the rail and leaned over, gazing. He was in time to see the long dark back of the dolphin moving in a swell alongside the keel. Naturally she could not have known that the boat was about to be towed. With the sudden jolt of the line the craft was yanked forward. She bobbed downward, and it struck her flank with a thud.

A red trail of blood stained the foaming grey water. Then she disappeared below the waves.

"Ow!" cried Kamuelo. "Stop! Stop!"

"What's the matter?" demanded his father.

"No! Stop! We've struck Wiki!"

"Huh? Don't be crazy! How could we?"

The boys and girls sat on the beach all afternoon quieter than usual. They built houses in the warm coral sand, or strung *leis* of curled-up shells. And all the time they helped Kamuelo scan the waves for the dolphin.

His mother called him to supper. But he was not hungry. As soon as he had helped to dry the dishes he raced back to his lookout on the beach.

He decided that he might be able to see better if he climbed a coconut palm. He clasped its scaly trunk and drew himself nimbly upward. In a minute he was balancing among the floppy branches.

He gazed and gazed against the flaming sky and sea until his eyes stung. He was about to give up when suddenly he thought he saw something bobbing on the tide. His pulse jumped, but he did not let himself

hope too much. He must not be disappointed if it were not the precious dorsal fin. . . .

He could not bear to wait. He trembled so hard that he scraped his shins as he scrambled down the trunk of the palm. He ran helter-skelter across the beach.

"Wiki!" he shouted suddenly.

A head with a beak had shown above the ripples—a long, dark back. . . .

Long Wound

HE flung himself into the surf, clothes and all, and splashed out to meet her as if he were an Olympic swimmer. In a few moments he met her, face to face. He put his arms round her neck. In the trough between the breakers he could see a long red gash in the skin on her flank.

"Oh, Wiki!" he gasped. "Thank God we didn't kill you! You know, we didn't mean to do you any harm!"

She seemed to understand. With her kindly eyes she gazed straight into his. They were full of trust.

There was rejoicing in Calabash Cove at the safe return of Wiki-Wiki.

The newspapers in Hilo—and even in big Honolulu on another island two hundred miles away—reported the return of the dolphin to Calabash Cove. Tourists went out of their way to catch a glimpse of her. Several press photographers and a television camera crew flew down from Honolulu, hoping to take pictures of Kamuelo swimming on her back. They each offered him five dollars for posing.

Bad News

"No, thank you," he kept saying politely but firmly. "No thank you."

He would have liked the money very much to buy a skin-diving outfit. But he refused to ride Wiki, or to help anyone else to do so, until her wound was fully healed.

It was a happy morning for Kamuelo when he finally dared to spread out his legs for her to nose between them from the rear; and he felt himself buoyed up on her back in the spindrift. Once more he bounded along from wave to wave, as easy as singing. A cheer rose from the children and grown-ups watching enviously from the beach.

"Ride her, cowboy!" screeched the small boys.

Now, however, the cameramen did not come from Hilo or Honolulu to try to take pictures. For suddenly there was some bad news. The people in the Islands were very worried—including the villagers of Calabash Cove. For a great tidal wave was on its way across the ocean. . . .

© Margaret Mackay, 1963. Wiki the Dolphin is condensed from *Dolphin Boy* published by George G. Harrap at 12s. 6d.



The Countess Olivia gave an amazed gasp when her steward Malvolio swaggered up wearing his bright new yellow stockings with cross-garters. Had the stern and humourless servant gone mad?

C. E. BROCK

CALL IT WHAT YOU LIKE

... that, in effect, was what Shakespeare said when he finished this play. The title he gave it had nothing to do with the tangled plot, and the play was presented as **TWELFTH NIGHT—OR WHAT YOU WILL**

OF all William Shakespeare's plays, *Twelfth Night*, written about 1599 or 1600, has one of the most complicated plots. It is a comedy in which mistaken identity plays a dominant part, and is the story of the "eternal triangle" of love. Many of the terms used in the dialogue are topical, which an audience of the sixteenth century would have appreciated, but which are wasted on the modern audiences of today without explanation. The play was probably written as an entertainment to be presented at Christmas time, on the last day of the traditional feast—hence the title *Twelfth Night*.

Viola, disguised as a nobleman, goes to the court of the Duke Orsino, ruler of Illyria, and wins his trust and affection as a faithful messenger to the Countess Olivia, with whom Orsino is in love. When it becomes obvious that Olivia refuses all contact with him, the Duke is thrown into despair. But then Viola reveals that she is really a woman, and has been in love with him for some time. So Orsino, thwarted in one love affair, is successful in another, and marries Viola.

Source of Money

SEBASTIAN is Viola's twin brother. She had believed that he was drowned in the shipwreck which stranded them in Illyria, but at the end of the play she discovers that he is alive. He marries Olivia.

Sir Toby Belch is the Countess Olivia's uncle who, with his two friends Maria and Sir Andrew Ague-cheek, enrages the steward Malvolio with his noisy drinking-bouts. He is made responsible for Malvolio's safety when the Countess believes her steward to be mad. When the steward is eventually released, Sir Toby marries the servant girl Maria.

Sir Andrew, a great friend of Sir Toby Belch, is the idiot of the play. Sir Toby has led him to believe that he has some prospect of marriage to Olivia, and he stays for months at the Countess's house, waiting for a chance to woo her, but finds none. Sir Toby, meanwhile, drinks away Sir Andrew's money, being sure that he has found a lifelong source of income.

Well Rewarded

MARIA the servant girl warns Sir Toby and Sir Andrew when they try Olivia's patience too far. In the end she is well rewarded for her labours, for she marries Sir Toby.

Malvolio, Olivia's self-righteous steward, is an important man in the household, who threatens to turn Sir Toby Belch out of the house for his rowdy behaviour, so earning the knight's hatred.

Malvolio falls victim to a trick devised by Maria to bring him into disrepute with the

Countess. He finds a letter in the garden where he takes his afternoon walk, which he takes to be from Olivia. In it the Countess declares her love for him, and instructs him to wear yellow stockings with cross-garters to please her—a fashion that Olivia in fact really hates.

Malvolio does not know that Maria, the servant maid, has devised this way of bringing him into disgrace with his employer. Obediently following the instructions Malvolio appears before Olivia wearing yellow stockings. The Countess believes him to be mad, and orders Sir Toby to take care of him. Eventually Malvolio is released, but he has paid the price for being so overbearing.

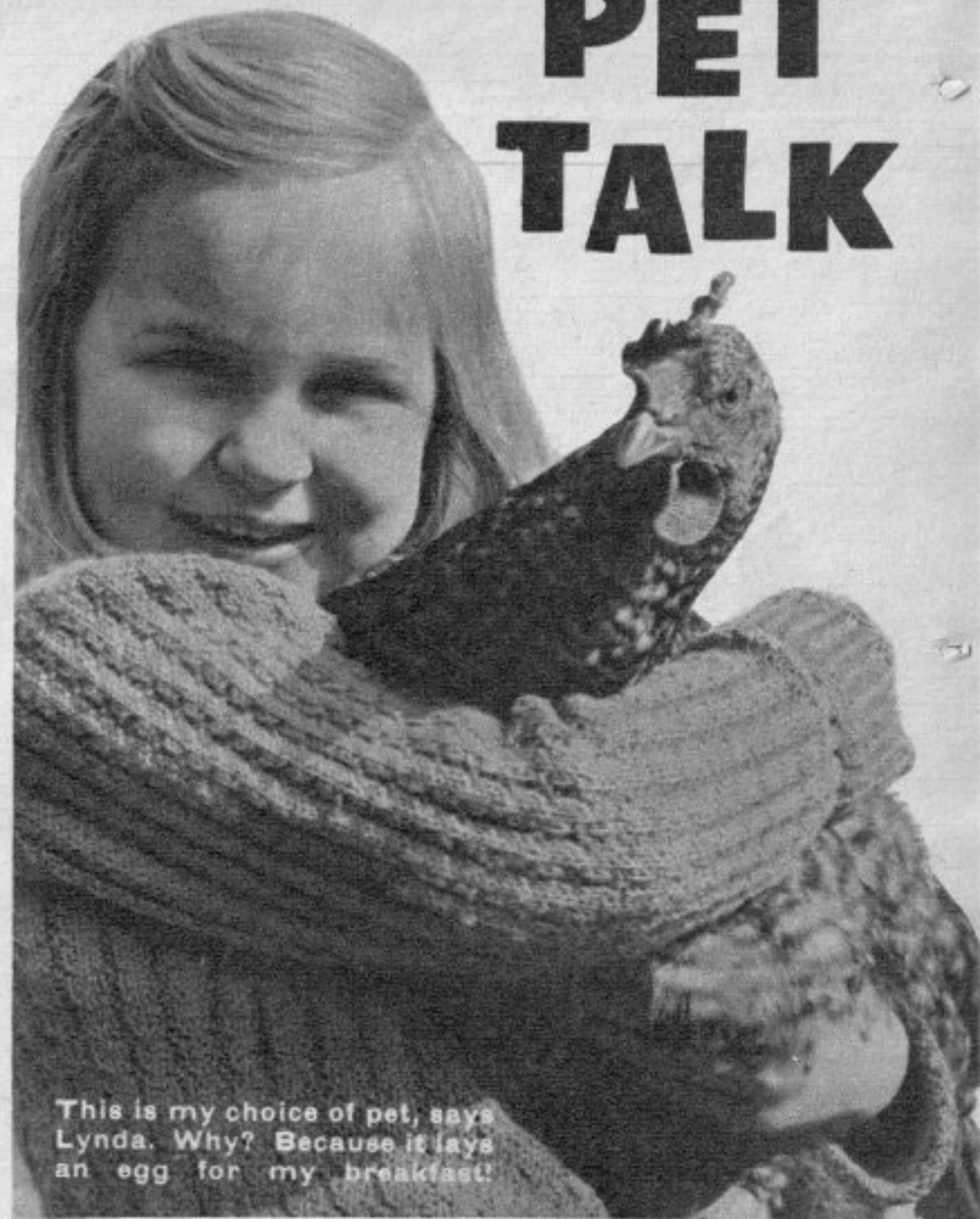
Feste the Clown might well be termed the great onlooker in *Twelfth Night*. He knows most of the characters in the plot, plays on the weaknesses of some, while offering friendship to others. Olivia's father had taken a great delight in Feste's wit, but Olivia herself, mourning for her dead brother, sharply reproves the Clown when his gentle taunting becomes too much for her.

The baiting of Malvolio he enjoys, although he is at heart a kind person who will only torment people to a point. Eventually it is he who supplies the steward with pen, ink and paper in order that he may write to the Countess and tell her that he is not mad, but was deceived by the letter which he believed had come from her.



Viola, as Orsino's messenger, visits Olivia, who is in mourning for her brother.

PET TALK



This is my choice of pet, says Lynda. Why? Because it lays an egg for my breakfast!

By EDMUND BURKE

WINTER FEEDING

Many of the colourful foreign birds, and indeed a number of our natives, are insect eaters. During the summer it is not so hard to find food for them, with crickets, grasshoppers, ear-wigs, leather-jackets and flies all around us. When winter comes you must find a suitable substitute. You might like to try your hand at making your own.

Take 6 ounces of dry puppy meal and 6 ounces of fine dehydrated meat (you can find both in the pet shop), add 2 ounces of dried shelled shrimp and 2 ounces of fish meal. Mix them together thoroughly and next add a finely grated hard-boiled egg. Run the mixture through the mincer, set at its finest cut. Finally mix into the dry ingredients a half teaspoon of honey and four drops of a standard vitamin concentrate. The mass is worked by hand until it is completely blended and it can then be fed to any insect-eater.

If you are feeding the larger varieties the mixture need not be made quite so fine. Store it in an air-tight glass container and feed as required. Oddly enough, some tropical fish thrive on this same mixture!

RARE BREED

I have just acquired a new puppy, although I did not really need one. We already have six dogs living in the house, but when I saw this young lady I could not resist her. She is a member of that rather rare breed, the Weimaraner.

They come, like so many other breeds, from Germany and were created nearly one hundred and fifty years ago.

It was not until 1929 that the first Weimaraners were allowed out of their native land. The records say that they are highly intelligent and were first used to hunt big game, although today they are classed as gun-dogs. I hope that she will learn to work in competitive obedience and from time to time I will let you know how she is coming along.

PERSONAL POSSESSION

Speaking of puppies, if you give one an old shoe or slipper of its own, you can save yourself a lot of trouble. Teach it not to touch any other shoes and let it learn to do what it wants with its own property. Otherwise you may find yourself constantly scolding a playful pup for damage done.

WHY NOT BUILD THESE MODEL BOATS?



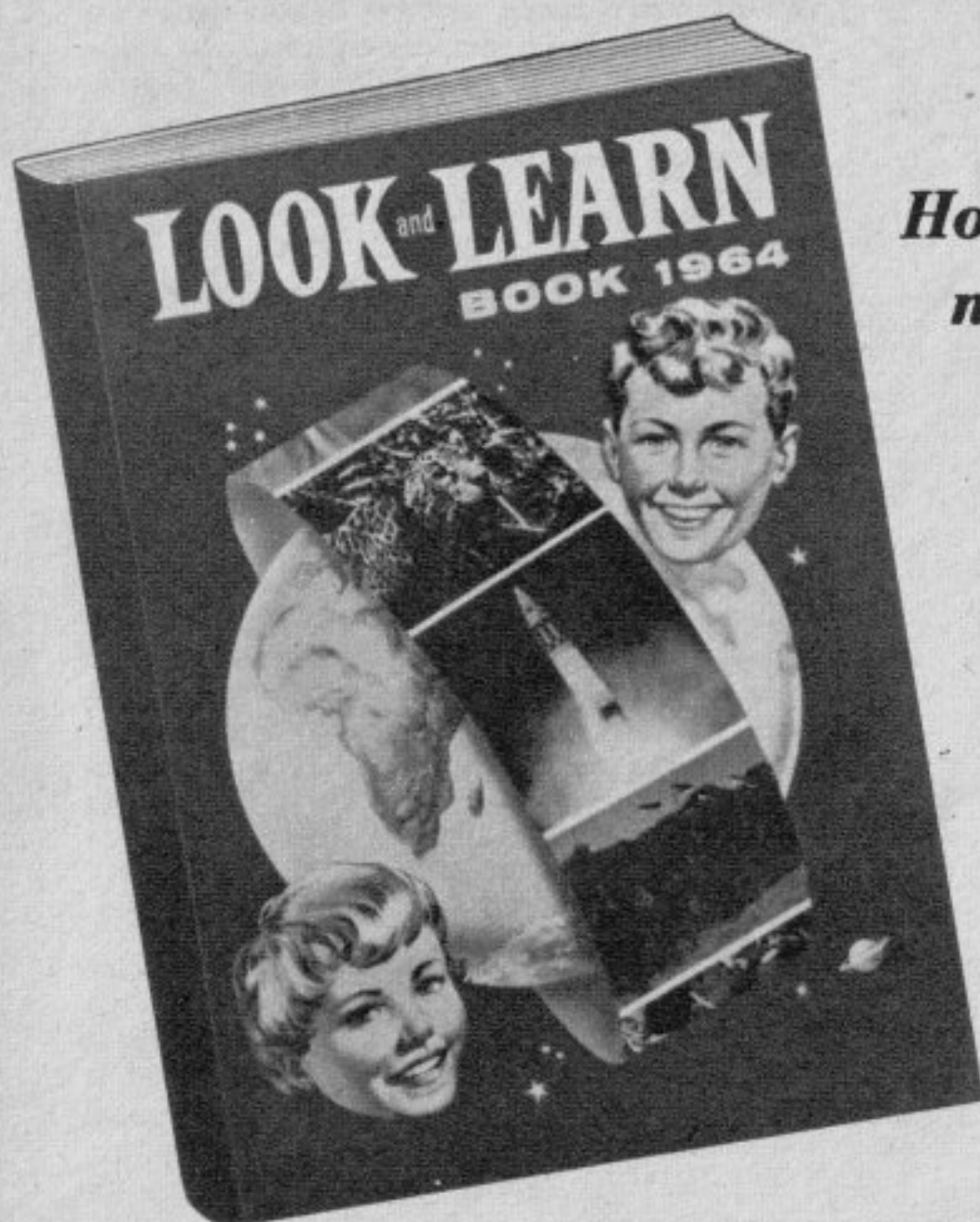
IT'S a sight we always enjoy, watching model craft that look just like the real thing, sailing across a pond or lake.

But why only watch? Why not build a craft yourself?

The days of the ordinary model sailing yacht are gone. Today's tiny craft follow many styles—the catamaran, outrigger, cabin cruiser and outboard—the last two power driven. You can also have fun with a simple craft powered by a lump of camphor!

Full instructions for building all these appear in the new LOOK AND LEARN BOOK now on sale. Plans show how to make and assemble every part, including sails where needed, and all small fittings. The hull of the cabin cruiser can be made of paper laminate, planking, glass fibre, and a layer principle known as "bread and butter."

Fifteen pages of the LOOK AND LEARN BOOK are devoted to this helpful and interesting model boats feature—but that still leaves nearly 150 more, filled with exciting features (many illustrated in full colour). The book opens with a series to excite the imagination of every reader. Called SEVEN STEPS FORWARD it tells the whole story of the progress of man, from the first making of fire to the launching of space satellites. Then there are features on Canada... a great country comes to vivid life... and others which surprise by showing you how little you know about life in the world's deep seas, how a book is printed, how maps are made, the "monsters" revealed by the microscope, how animals run, the romance of carpet making, the amazing life of the bee.



Hours of reading, fascinating new knowledge, glorious colour to look at... don't miss this wonderful new

LOOK and LEARN BOOK

on sale at all
Newsagents and
Bookstalls

PRICE 12'6



THE FIRST CHAPTER Trouble in the Form!

"SKINNER!"
The voice of Mr. Quelch, master of the Remove Form at Greyfriars, rang through the Form-room.

Morning lessons were half-way through, and the Remove were being instructed in the mysteries of geography.

While Mr. Quelch was writing on the blackboard, Skinner, the practical joker of the form, had soaked a paper pellet in ink, and he was taking careful aim at the head of Frank Nugent, in the far corner of the room, when the Form master suddenly swung around and caught him in the act.

"Skinner, come out and give me whatever you have in your hand!" Mr. Quelch commanded.

A faint grin flitted across Skinner's face as he made his way out to the front of the class. Mr. Quelch held out his hand to receive whatever Skinner had to give him, and the Remove humorist hesitated.

"Give it to me, Skinner!"

"But, sir—"

"Not another word, boy! Give it to me!"

Skinner suppressed a grin and handed over the inky pellet, and there was a gasp of annoyance from Mr. Quelch as his fingers closed over it. A subdued chuckle ran round the Remove.

"Is this a misguided attempt at practical joking, Skinner?" rasped Mr. Quelch, making a movement for his cane.

"Nunno, sir!" said Skinner. "You insisted on having it, sir!"

Mr. Quelch's lips set tightly.

"We will let that pass," he said. "You will kindly remember that the Form-room is not the place for practical jokes. Hold out your hand!"

Harold Skinner reluctantly extended his palm and received a firm stroke of the cane. He returned to his place and sat down.

Billy Bunter was in trouble very quickly after Skinner. Billy was not in the mood for geography owing to a not unusual attack of hunger. He had been caught sneaking away with a meat pie from Harry Wharton's study, and Wharton had deprived him of the prize before he had an opportunity of sampling it. Bunter's imagination had been running riot over that pie all the morning.

"Bunter!"

The Owl of the Remove jumped at the sound of his name.

"Bunter, from where do we obtain our tea?" demanded Mr. Quelch, relentlessly pursuing the subject of geography again.

Billy Bunter's brain, engrossed in thoughts of his own personal food problem, was quite unable to rise to the occasion.

"Our t-tea, sir?" he stammered. "Why, we get it in Hall, sir!"

There was a gasp from the Remove and then a roar of laughter.

"Silence!" the master roared. "There is nothing amusing in this ignorant boy's

BEGINNING . . . ADVENTURES OF THE
WORLD'S MOST FAMOUS SCHOOLBOY

BILLY BUNTER of Greyfriars School

by FRANK RICHARDS



"Skinner!" said Mr. Quelch grimly. "Give me whatever you have in your hand!" Skinner handed over the ink-soaked pellet.

stupidity. Bunter, come here! Hold out your hand!"

"Oh, really, sir!" gasped Bunter. "What for?"

"Hold out your hand!"

Swish!

"Yaroooooooh!" Bunter gave a howl that must have been heard all over Greyfriars.

"Now go back to your place and remember that we are discussing geography, not meals!" rapped out Mr. Quelch.

As the fat junior returned to his seat Skinner whispered something to him. Bunter nodded.

The lesson was resumed, but several juniors, glancing at Bunter a little later, saw a gleam in his eye, and when they heard him clear his throat, they knew what that meant. Bunter the ventriloquist—and a very clever ventriloquist at that—was going into action.

"Gr-r-r-r-r-r!"

Mr. Quelch started as the growling of a dog rang through the Form-room, and he whisked round from the blackboard.

"Bless my soul! Is that a dog?"

"Gr-r-r-r-r-r!"

"There is certainly a dog outside the Form-room," said Mr. Quelch, frowning at the interruption. "Bolsover, you are nearest the door. Please go and send the animal away!"

"Certainly, sir!" grinned Bolsover, making for the door with alacrity, knowing full well that it was one of Bunter's tricks.

"Gr-r-r-r-r-r-r-r!" The growling increased in intensity, then changed into quite a terrifying barking and yelping. Mr. Quelch looked quite startled.

"Dear me! I trust that Bolsover will not be bitten!" he exclaimed and hastened towards the door. He came to a sudden halt, however, as if a sudden idea had come to him and looked fixedly at Bunter. The Owl of the Remove was smirking with delight at

the success of his efforts, blissfully unconscious of the expression of suspicion that had suddenly appeared on Mr. Quelch's face.

"Bunter, I believe you are playing one of your ventriloquial tricks on me!"

"N-n-nothing of the kind, sir!" gasped Bunter. "I—I wouldn't dream of making you think there was a dog outside, sir! Skinner tried to get me to do it, but I told him I had too much respect for you!"

Mr. Quelch glared at him with a baleful eye. "I will deal with you later, Bunter," he said, and wrenched open the door of the Form-room.

"I think I've scared that dog off now, sir," said Bolsover from the passage.

"Oh, you have, have you?" said the master through tight lips. "Perhaps you will be interested to know that Bunter has already admitted that the whole thing was a ventriloquial trick. Return to your place!"

"Oh crumbs!" Bolsover almost staggered to his desk.

"Please refrain from making ludicrous exclamations, Bolsover. Probably, however, you will have more excuse for making them later in the morning. I want you and Skinner and Bunter to stay behind after lessons to discuss this matter!"

After which, Mr. Quelch found that he had no more trouble with the Remove that morning. The three juniors, however, wondered what was in store for them. The master was angry, and they knew that the punishment was likely to be severe.

It was. They each were given an imposition—to write out, in their own precious spare time, one thousand lines!

THE SECOND CHAPTER

Just the Thing!

MR. QUELCH required the lines delivered in two instalments—the first half before Saturday evening and the second before the following Wednesday evening. So well did Bunter get on with them that he had finished five hundred lines before bedtime. He went downstairs from his study to deliver the "impost" to the Form master's room.

There was no answer to the knock he gave on the door, and the fat junior grunted. "Blow him!" murmured the Owl disrespectfully. "S'pose I'd better have a nose round the House and find him!"

Before that, however, Billy had a "nose" round the room. The most inquisitive junior at Greyfriars could not let such an opportunity as this pass by.

He rummaged among the books on Mr. Quelch's desk, but there was nothing there to interest him. But on the blotting pad itself were several sheets of manuscript which he recognized at once as part of the History of Greyfriars School which the master had been writing for some time. Bunter gave a sudden start.

"My hat!" he exclaimed.

He dived his hand into his pocket and, fishing out a newspaper cutting from among the other contents, glanced eagerly through it.

It was a cutting from the *Courtfield Express*, the local newspaper. Bunter had recently picked up the paper while eating some doughnuts in the tuck shop in Court-

field, read the paragraph and torn it out.

"In order to encourage the study of local history," ran the announcement, "we are offering the sum of ten guineas to the reader who, in the opinion of the Editor, sends in the best essay on any episode in the history of the district."

Ten guineas! Bunter's mouth had watered at the thought of the tuck he could buy with that amount of money. It was a forlorn hope, for Bunter knew his limits as an author, but he tore out the announcement and stowed it in his pocket. Now he read it again, and his eyes gleamed behind his spectacles at the idea that had come into his mind. He picked up Mr. Quelch's manuscript.

"Henry the Eighth's Encounter With The Grey Friars"—that was the heading of this particular chapter of Mr. Quelch's monumental work. Just the thing, thought the fat junior. Ten guineas! Loads and loads of beautiful grub!

Bunter was not intentionally dishonest, but his ideas were a little vague at times. Where something really worth having was concerned, standards of honesty were liable to disappear completely.

And that is what happened on this occasion. After a little hesitation, Billy quickly transferred Mr. Quelch's batch of papers to his pocket and hurriedly quitted the room. The impost was still clutched in his hand, but he had almost forgotten it.

He had just reached the top of the staircase when a heavy hand fell on his fat shoulder. He had fallen into the hands of Skinner and Bolsover, and trouble was brewing.

"Yank the fat frog into my study!" said Skinner. "We'll teach him to sneak!"

Billy Bunter kicked out desperately, but his struggles were of no avail and within a few seconds he was in Skinner's study. The impost which Bunter had been carrying fell out of his hands and Skinner picked it up.

"Only the fat fool's lines I expect," growled Bolsover. "Chuck them on the fire and make him do them again!"

Skinner hurled the papers on to the fire where they burst into flames at once.

"Ow! You rotters!" Bunter gasped, and looked around wildly for a means of escape.

Necessity is the mother of invention, however, and as Bunter stood there, like a hunted porpoise at bay, a cunning gleam entered his eyes.

"Ow! You rotters," he repeated. "You've jolly well gone and done it now!"

"What the dickens are you burbling about, Bunter?" demanded Skinner.

"Yah! Leggo first and I'll tell you! It's a jolly serious matter! Nice mess you've got yourselves into now, I must say."

"What do you mean, you fat idiot?" roared Bolsover.

"Those papers you threw on the fire—"

"Well, what about them? You'll have to do your lines again, and serve you right, sneaking to old Quelch after getting me to play up over that beastly dog trick."

"You silly asses!" hooted Bunter. "They weren't my lines at all! They were papers of Quelch's."

"Oh, crumbs!"

The two Removites looked at Bunter uneasily.

"Well anyway," said Bolsover optimistically, "they may not be of any importance."

"But they are!" said Bunter with a fat chuckle. "They were chapters of his mouldy old History of Greyfriars. You've done it now, you're properly in the soup, you silly asses! He, he, he!"



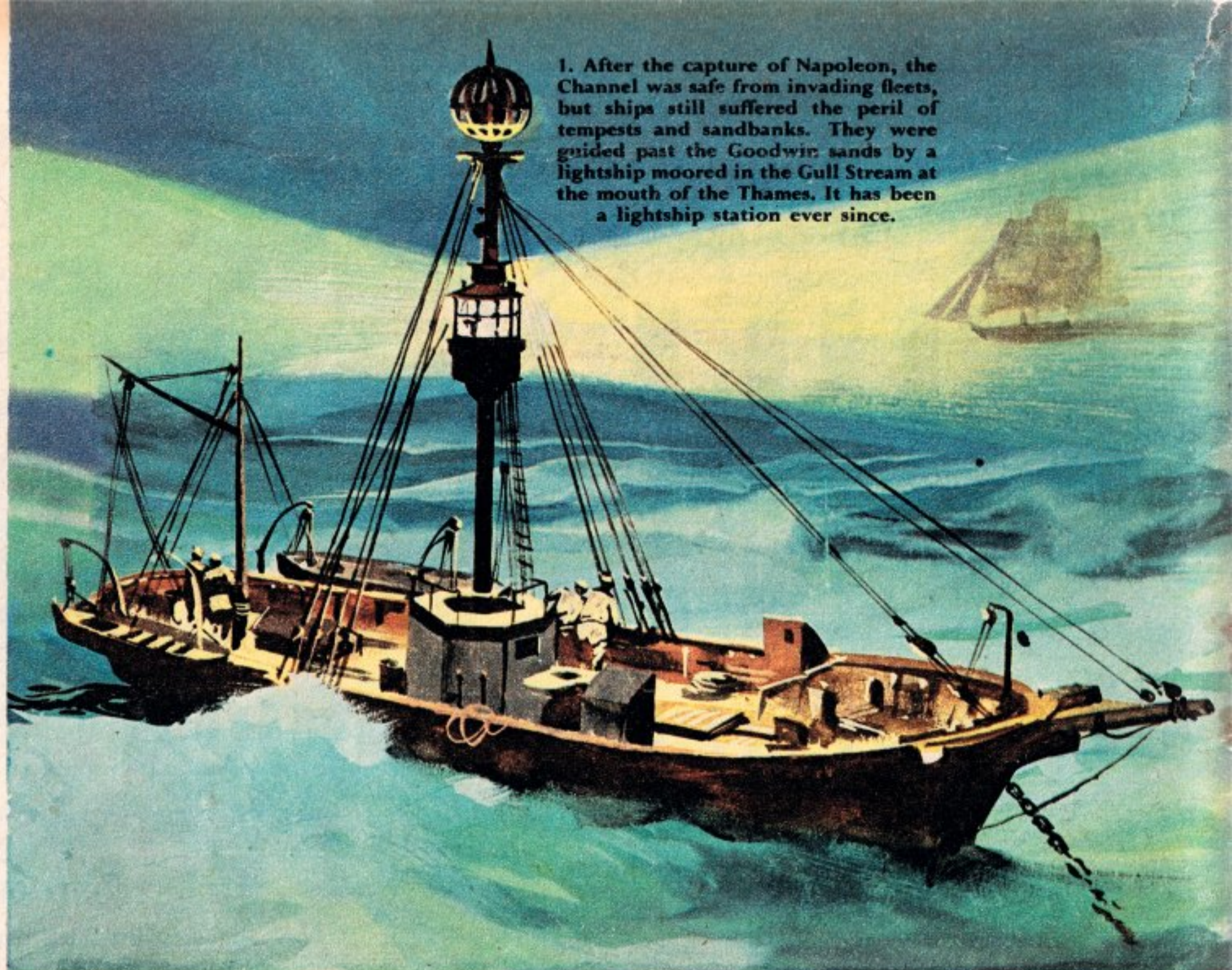
"Oh, you rotters!" Billy Bunter gave a yell as Skinner picked up the sheaf of papers from the floor and hurled them into the fire. The Owl of the Remove made a leap at the fireplace, but he was too late.

CONTINUING . . .

SAGA OF THE ENGLISH CHANNEL

RESCUE in the NARROW SEAS

2. Shipping was changing. The days of the sailing ships were numbered, for steamships had been introduced, and by 1822 a regular steamer mail-service ran between Dover and Calais. At first the navy would use them only as tugs, but finally they switched to steam-driven vessels.



1. After the capture of Napoleon, the Channel was safe from invading fleets, but ships still suffered the peril of tempests and sandbanks. They were guided past the Goodwin sands by a lightship moored in the Gull Stream at the mouth of the Thames. It has been a lightship station ever since.

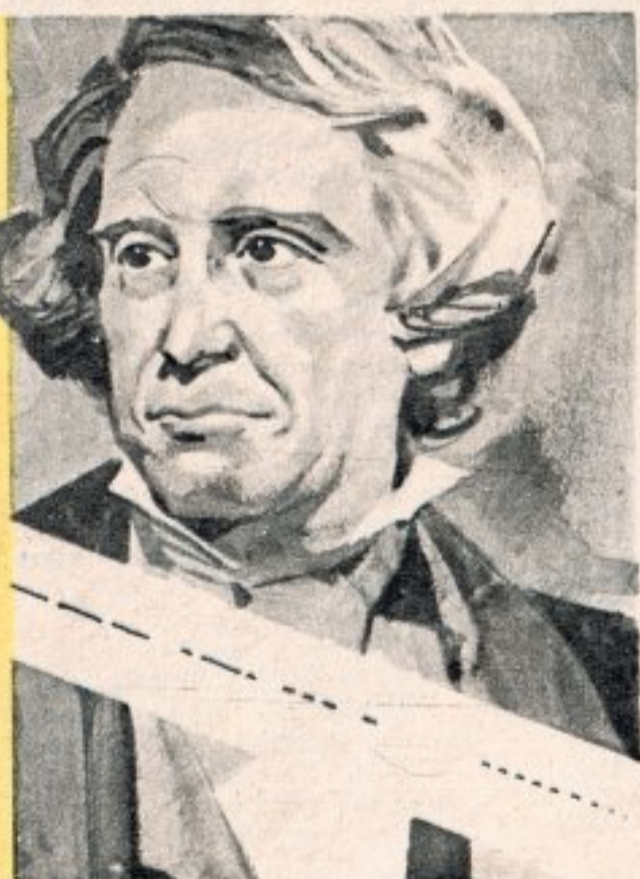


3. The greatest contribution to safety in the Channel was made in 1824, when the Voluntary Life Boat Service was formed from fishermen along the coast. All the members were experienced sailors who braved any weather to rescue crews from sinking or stranded vessels. The lifeboatmen of ports like Deal, Walmer and Kingsdown became world-famous for their courage in the face of terrible storms.

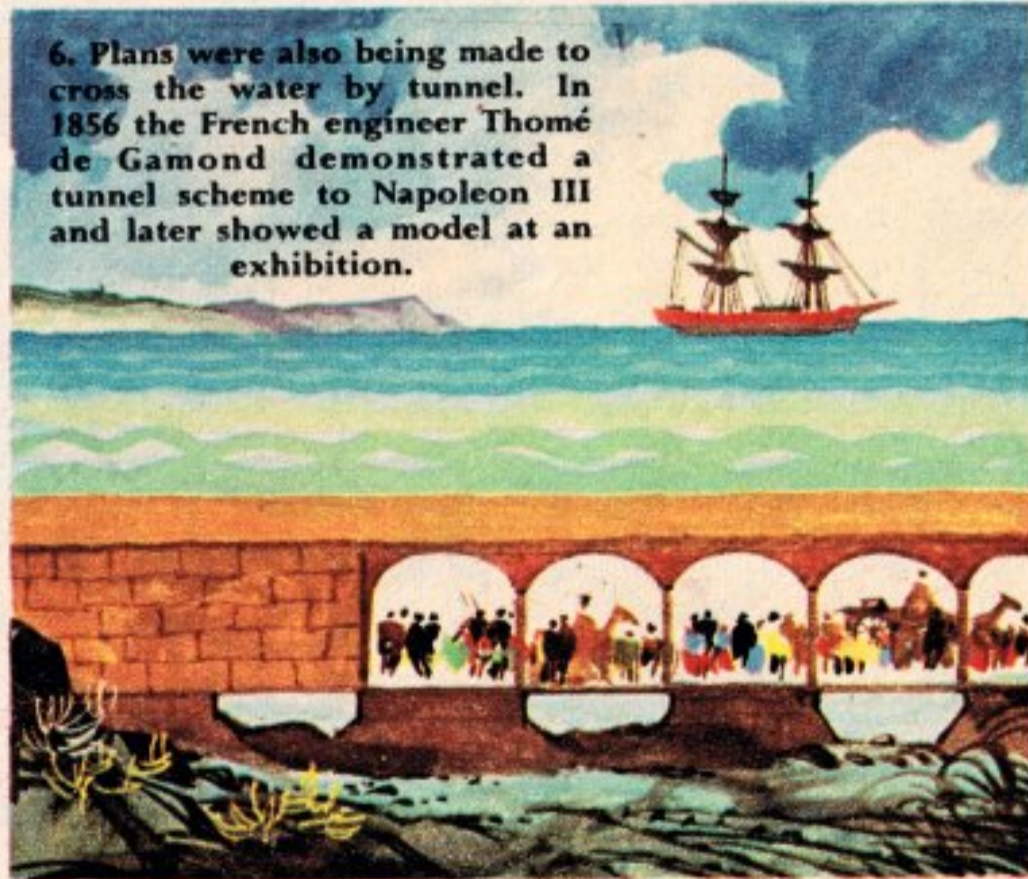


4. Merchant competition became tremendous when the Navigation Act, which had given England control of the Channel, was repealed in 1849. Steamships were now important, but England built her famous lean-hulled, white-winged tea-clippers during this period, to compete with American trade with China.

5. The system of morse code, invented by Samuel Morse, had been simplified until three words a minute could be transmitted by electric current signals. In 1851 a ship successfully laid the first telegraph cable between England and France. The Channel no longer relied upon ships to carry messages, and by 1860 five cables crossed the narrow seas.



6. Plans were also being made to cross the water by tunnel. In 1856 the French engineer Thomé de Gamond demonstrated a tunnel scheme to Napoleon III and later showed a model at an exhibition.



7. The first coastguard stations were built along the cliff tops of England in 1856, not only to give warning of ships in distress, but to stop contraband activities which still led to battles between smugglers and men of the Preventive Service. There was also a service of Royal Naval Coast Volunteers who fought in the ships of the navy.



8. Often the lifeboat men were warned by the coastguards of sinking ships. Then, clad in oilskins, they would row in an open boat to the wreck and throw out a weighted line. Each boat had a crew of up to seventeen men. They were paid for their rescue work out of public donations.



**NEXT WEEK:
A MOAT
AGAINST
INVASION**