



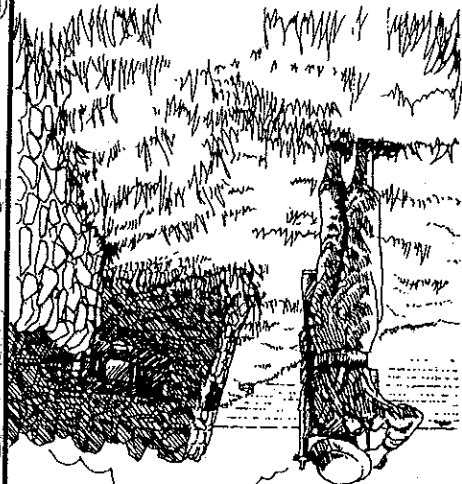
Beach walk

(CONTINUED INSIDE)

The two routes diverge just before Tresilian Bay: to follow the Country walk, cross the stone stile in the cliff path and head inland. To follow the Beach route, continue along the cliff path and down into Tresilian Bay.

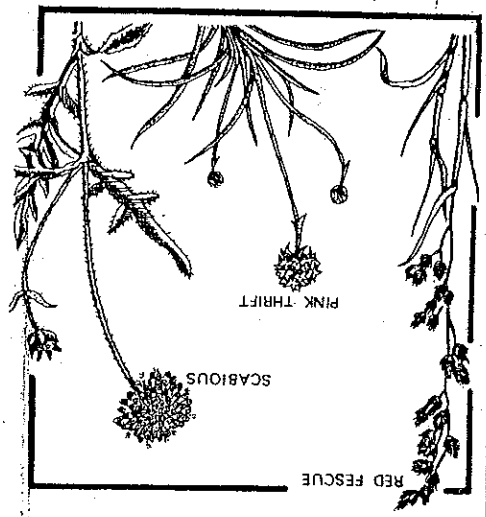
A World War II pill box still stands, uniquely faced in limestone canoullage and provides a reminder of those days when the Home Guard stood ready to defend the coast. The canoullage was repaired by the Heritage Coast Project to retain this as a feature and been opened to permit public access.

A new footpath, by kind permission of the owner, has opened to permit public access.



The path meanders through the gorge and into the "dry valley" at Dimhole. This valley, without a stream, was formed at the end of the last Ice Age when torrents of water flowed off the land from melting glaciers.

Care should be taken near some parts of the path where falls have brought the cliff edge into close proximity.



While walking west along the wide strip of coastal pasture, you might notice that this area is quite different from the vegetation in other localities. Here, the broad coastal strip is still privately owned but it is only used for grazing.

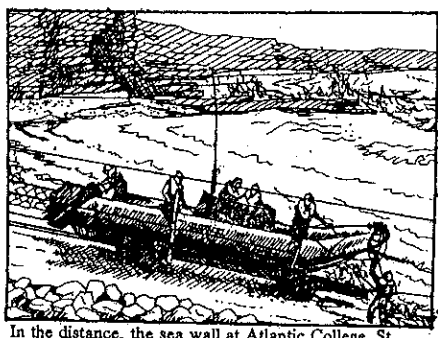
Species resistant to grazing, such as gorse and thistle, are thriving. Low growing fescue grasses predominate and grassland flowers are found which are more resistant to close cropping, such as lady's bedstraw, birdfoot trefoil, cowslip, primrose and scabious. Typical coastal flowers, such as pink thrift and blue rock sea-lavender grow on the very edge of the cliff alongside wild carrot and wild cabbage. As is often found on grassland which is grazed, field mushrooms and puffballs cover the ground after a shower of rain in late summer.

BEACH WALK

This forms part of a series of five walks from Col-huw Beach, Llantwit Major, designed to explore different aspects of the surrounding countryside. In general these walks are suitable for families and small groups who wish to learn more about the area. Walkers are advised to put on stout footwear and to take waterproof clothing.

Two routes overlap at the beginning; the shorter Beach walk will take approximately one hour and the longer Country walk will take about two and a half hours. It is important for those following the Beach walk to check that the tide is going out before commencing; an incoming tide moves very quickly, leaving walkers trapped between headlands. See how many of the wild flowers mentioned in this leaflet you can find along the way but please do not pick them, leave them to set seed for others to enjoy.

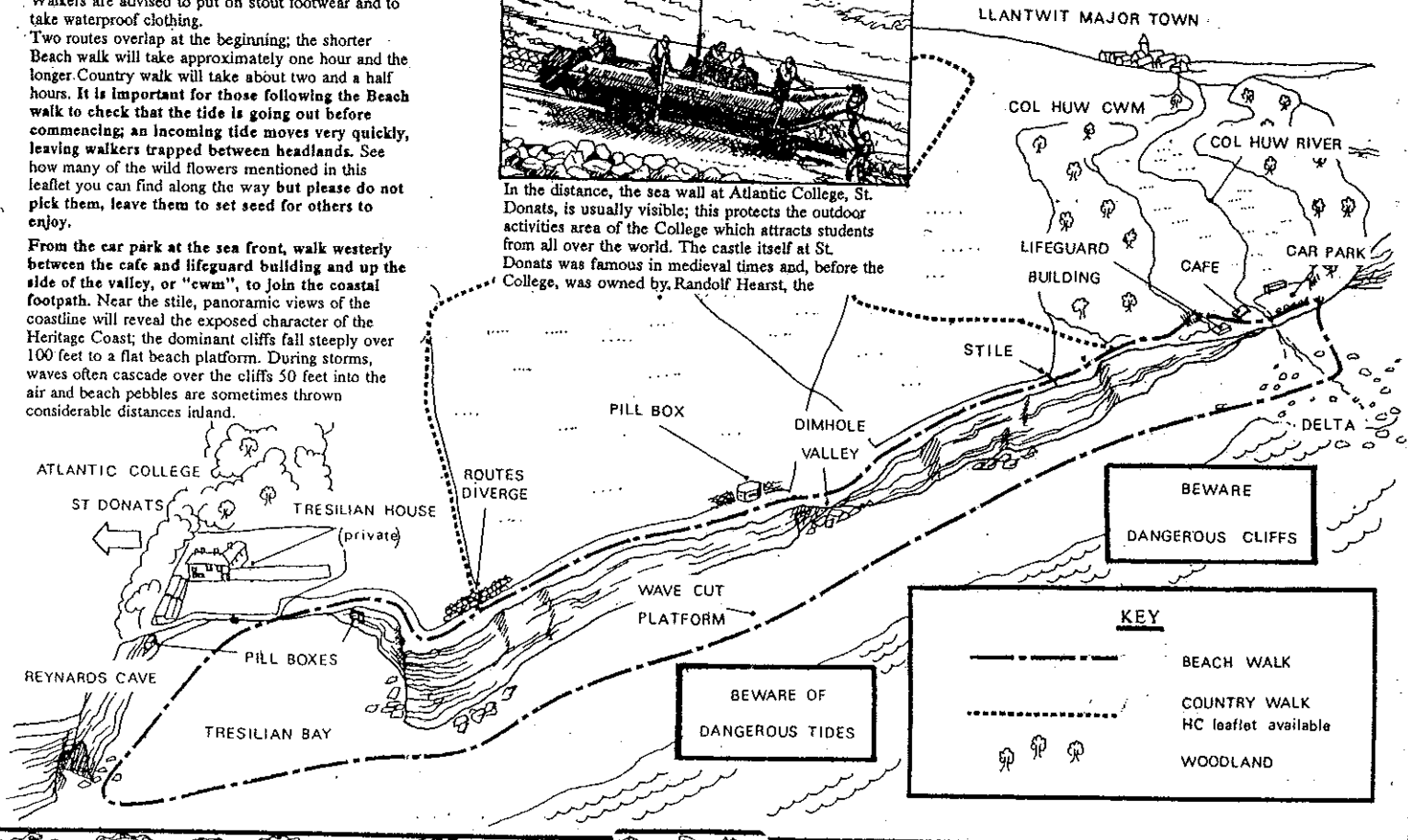
From the car park at the sea front, walk westerly between the cafe and lifeguard building and up the side of the valley, or "cwm", to join the coastal footpath. Near the stile, panoramic views of the coastline will reveal the exposed character of the Heritage Coast; the dominant cliffs fall steeply over 100 feet to a flat beach platform. During storms, waves often cascade over the cliffs 50 feet into the air and beach pebbles are sometimes thrown considerable distances inland.



In the distance, the sea wall at Atlantic College, St. Donats, is usually visible; this protects the outdoor activities area of the College which attracts students from all over the world. The castle itself at St. Donats was famous in medieval times and, before the College, was owned by Randolph Hearst, the

California newspaper millionaire. The students themselves run a registered inshore lifeboat station and you may notice in the bay the inflatable boats which have been developed for rescue purposes by the College.

(CONTINUED ON BACK COVER)



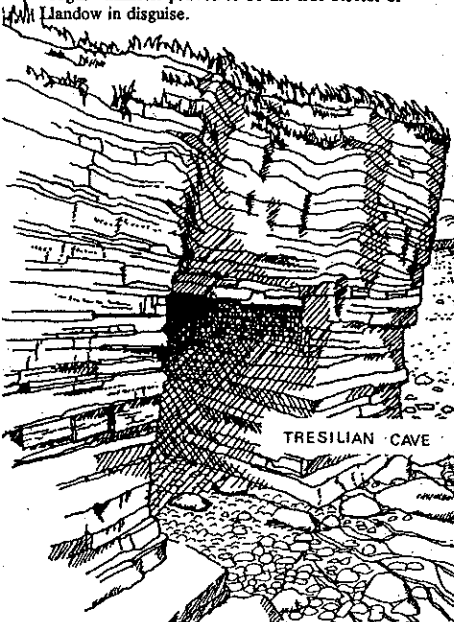
The tide should be on the ebb or at low water before you consider returning to Llantwit Major by this route.

Tresilian Bay is one of the most sheltered havens on the Heritage Coastline; "Tre", the place (of Sillian) indicates its origins, for it was on this site in the third or fourth century that Prince Sillian kept his court. The present Tresilian House was originally built as an inn and in the seventeenth and eighteenth centuries was reputed to have been connected with smuggling. A tunnel, now concreted over, was thought to have connected the House with one of the caves on the western part of the cove, where boats could have been beached and unloaded out of sight of the Coastguard. Tresilian House is now a private home.



TRESILIAN HOUSE

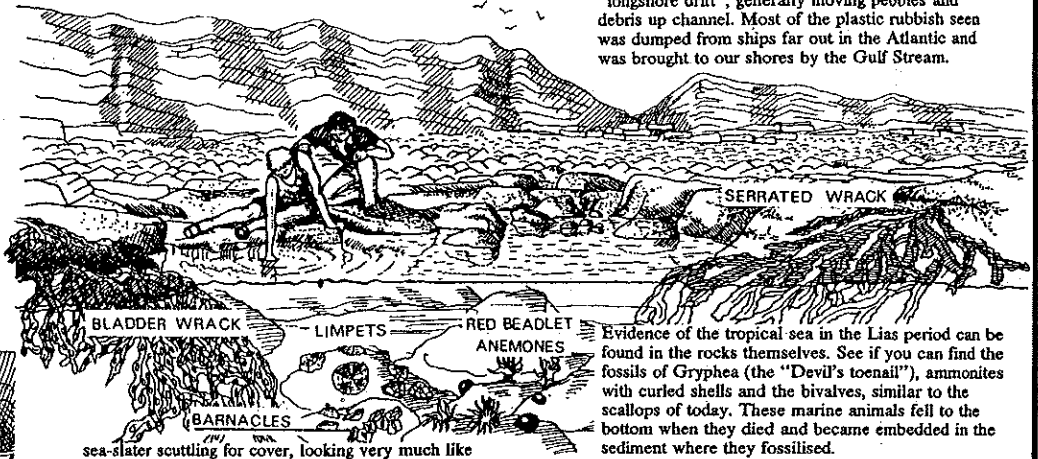
Once down in the Bay, walk across the storm beach of pebbles and on to the wave-cut platform. Notice how well the two World War II pill boxes blend into the scenery with their limestone camouflage. Walking westwards you will find Reynard's Cave round the corner, the largest cave on the Heritage Coast. In addition to its surprising roof span there is also an unusual "rock bridge" from one wall to another. An old legend led young couples to believe that if the girl could throw a pebble over this "bridge" at the first attempt, she would be married within the year. The varied colours on the walls of the cave are formed by the leaching of mineral deposits as water seeps through the rock. This was almost certainly the "St. Tresilian's cave near St. Donats" where the infamous pirate Colyn Dolphin was supposed to have been buried up to his neck to await the incoming tide; it was also a favourite site for clandestine marriages. A true account of such a marriage here relates to the parents of General Sir Thomas Picton, one of Wellington's divisional commanders, who was killed at Waterloo. Initially, at a marriage planned as a joke on the bridegroom, the "bogus" minister proved to be the true Rector of Llandow in disguise.



TRESILIAN CAVE

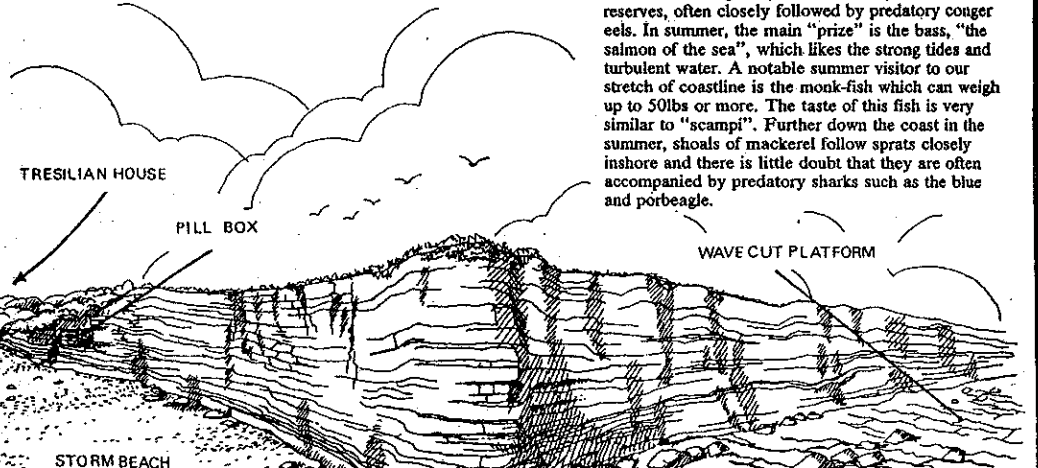
Still staying on the wave-cut platform, head eastwards towards Llantwit Major. A cursory glance across the flat rocks gives the impression that the area is completely desolate and that there are few creatures living here. This is understandable when you consider the extreme exposure, the pounding of the waves and the scouring by pebbles; a very harsh environment in which to live! You will have noticed that the rock platform is awkward to walk on because the waves and rainwater have excavated the original flat surface into contorted shapes. It is these crevices and rock pools which provide shelter for many plants

and animals and enable them to survive the period of exposure between tides. Most common here is the red beadlet anemone which, despite its lack of movement, is not a plant but an animal and feeds by fanning its tentacles in the water. Under a rock you may find the



sea-slug scuttling for cover, looking very much like the garden woodlouse. All these creatures are having a difficult time to survive so, when searching, it is important to replace any stones back into their original position. Seaweeds of different varieties and colours drape the rock surfaces or grow submerged in rock pools. At low tide mark is the dull-green bladder wrack, well known for its air bladders which pop when pressed; less common is the serrated wrack with a wavy edge to its "leaves" (fronds) which does not have bladders. The bright green sea lettuce, with broad fronds, is easily found in rock pools. Barnacles and limpets encrust the rocks, browsing on small seaweeds as they do on the hulls of ships.

The sheer drop of the cliffs gives the Glamorgan coastline its dominant character. The limestone rocks of these cliffs were formed about 180 million years ago at a time when the first dinosaurs walked on the Earth. This rock was formed in a tropical sea within a period of the Earth's history called the "Lias"; mud and the shells of minute sea creatures collected on the bottom, later hardening to form stone. Notice there are alternating layers of limestone and shale. This regular configuration is difficult for geologists to explain but one recent theory is that limestone rock accumulated under shallow seas and shale was deposited in much deeper seas. Thus, if true, there must have been a sequential alteration in the levels of ancient seas and even today, it is obvious that the present level is approximately 200 feet lower than that of these ancient seas.



TRESILIAN HOUSE

PILL BOX

WAVE CUT PLATFORM

STORM BEACH

These alternating layers make the cliffs particularly unstable. Weathering loosens the surface for erosion to occur; easy penetration of the shale layers by water makes the cliffs very friable and causes limestone blocks to fall continuously. Erosion also occurs at the "toe" of the cliffs from the pounding by waves and this results in undercutting. Earth movements which occurred 26 million years ago when the Alps were formed, were also felt in South Wales; notice how the horizontal layers in the cliff face have been disrupted. Cracking of the layers vertically (or "faulting") can be clearly observed on the surface and, on this stretch of coast, is responsible for quite dramatic falls; areas of recent falls appear buff-yellow in colour.

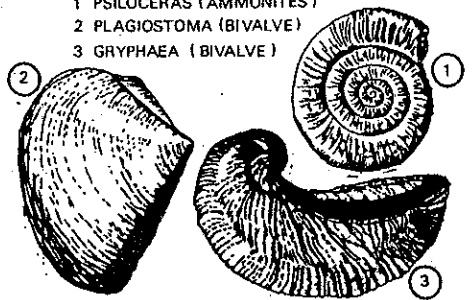
These cliffs are extremely dangerous and the public are advised not to walk underneath and not to approach the edge at any time.

Fallen blocks are quickly attacked by the sea and pounded into pebbles, forming a "storm beach". This helps in turn to dissipate the force of the waves at the base of the cliff. The inclination of the coastline towards the south and the prevailing south westerly direction of the waves produces an effect of "longshore drift", generally moving pebbles and debris up channel. Most of the plastic rubbish seen was dumped from ships far out in the Atlantic and was brought to our shores by the Gulf Stream.

Evidence of the tropical sea in the Lias period can be found in the rocks themselves. See if you can find the fossils of Gryphea (the "Devil's toenail"), ammonites with curled shells and the bivalves, similar to the scallops of today. These marine animals fell to the bottom when they died and became embedded in the sediment where they fossilised.

As it takes only seconds to destroy a fossil which took millions of years to form, please leave any you find for others to enjoy.

- 1 PSILO CERAS (AMMONITES)
- 2 PLAGIOSTOMA (BIVALVE)
- 3 GRYPHAEA (BIVALVE)



You will probably notice that sea angling is a popular pastime on the Heritage Coast. This is because the rugged nature of the Bristol Channel prevents commercial exploitation by trawlers. The accumulation of nutrients from the land encourages the build up of attractive food reserves and its strong tidal currents encourage certain species of fish. Most famous in winter is the cod which collects to gorge on the prolific stocks of crab, shrimp and ragworm found in the Channel before spawning in the Irish Sea. Shoals of whiting are also attracted by these food reserves, often closely followed by predatory conger eels. In summer, the main "prize" is the bass, "the salmon of the sea", which likes the strong tides and turbulent water. A notable summer visitor to our stretch of coastline is the monk-fish which can weigh up to 50lbs or more. The taste of this fish is very similar to "scampi". Further down the coast in the summer, shoals of mackerel follow sprats closely inshore and there is little doubt that they are often accompanied by predatory sharks such as the blue and porbeagle.

Notice how far the tide goes out! In the Bristol Channel a tidal range of up to 50 feet between high and low water is the second highest range in the world; the highest is in the Bay of Fundy in Canada. High tides at intervals of about twelve and three-quarters hours are determined mainly by the moon as it passes round the earth. It is interesting to note that while the tide takes about six hours to move in and six hours to move out, the speed at which it does so is uneven; for example, at mid tide (after three or four hours) it is three times faster than at one hour before or after low and high water. Up to a half hour "slack water" occurs both at high and low tide. When you are finally approaching Col-huw Beach, note how far towards low water, the sand and rocks extend from the beach front in a conspicuous "delta". Originally this debris would have been carried by the torrent of water pouring down from the melting glaciers at the end of the last Ice Age and, even today, the remains of this delta are maintained by the tiny Col-huw river which wends its way to the sea.

Climb up the beach and cross the bridge into the car park.