

The shore features of the south coast of the Massif de la Selle are not so homogeneous as those of some of the other geographic divisions of the Republic, but the evidence of recent emergence is clear. Areas of Quaternary marine rocks are extensive only in the region near Jacmel, where they reach an altitude of 65 meters above sea level. Farther east, where mountains border the coast, the emergence apparently has not been so great except near the Dominican border, although at almost every locality where the shore was seen there is evidence of an emergence of about 10 meters.

SUBLITTORAL FEATURES.

The sublittoral platform that parallels the shore around the indentation of Jacmel Bay is very narrow, indicating that the bay is the submerged part of the southeastward-plunging trough, which during Pliocene time was a bay that extended far inland toward the northwest.

Between Jacmel and Marigot the sublittoral platform is narrow. East of Marigot it is wider and attains a maximum width of 10 kilometers, as limited by the 20-fathom line. Along this part of the coast the outline of the platform is more irregular than it is farther west. It seems unreasonable to assume that so wide a platform has been planed off by wave erosion since the emergence of about 10 meters, but as an emerged wave-cut platform is not exposed at the foot of the cliffs it is assumed that the water on the platform was about 10 meters deeper before the emergence.

The slope from the outer edge of the platform into deep water is very abrupt. Within a distance of 1.5 kilometers from the outer edge of the platform a depth of 1,095 fathoms (2,002 meters) is recorded. The maximum recorded depth near the shore, 2,245 fathoms (4,106 meters), is only 15 kilometers from the outer edge of the platform.

MASSIF DE LA HOTTE.

NAME AND EXTENT.

The name Massif de la Hotte is here applied to the area that embraces most of the long Southern Peninsula and is derived from the name of the highest mountains in the region, the Montagnes de la Hotte, which are in its western part. The Massif de la Hotte is imperfectly separated from the Massif de la Selle by a narrow gap that extends from Jacmel to Grand-Goave, and there is no abrupt change in the surface features of the two regions. The massif is about 185 kilometers long and has an average width of 35 kilometers.

GENERAL FEATURES.

The Massif de la Hotte is the largest geographic province in the Republic to which a separate name has been applied. It contains a great variety of surface features, and is divisible into prominent surface units that are here described as separate subdivisions.

The massif is divided into two mountainous parts by the gap that is traversed by the road from Miragoâne to Aquin, whose crest has an altitude of 300 meters above sea level. East of the gap the crest of the peninsula has an average altitude of about 1,000 meters above sea level. West of the gap mountains attain a maximum altitude of perhaps 2,000 meters in the Montagnes de la Hotte.

LAND FEATURES.

The Massif de la Hotte is here divided into an eastern and a western part. The eastern part comprises two-thirds of the massif, including all the narrow part of the peninsula, and extends westward to an arbitrary line drawn from the eastern edge of the Cayes Plain northward to the valley of Rivière des Baradères. The western part embraces the wider western third and contains the highest mountains.

EASTERN PART.

The surface features of the eastern part of the massif are very diversified. Some areas having more or less definite boundaries are characterized by distinctive features and are given separate names.

NORTH SLOPE.

A narrow coastal ridge that is divided into two parts by Petit-Goave Bay extends from Grand-Goave westward to Miragoâne, embracing Tapion du Petit-Goave and Tapion de Miragoâne. Both Tapions trend about N. 70° W. Tapion du Petit-Goave has a maximum altitude of about 400 meters above sea level and is imperfectly isolated from the mountains to the south by the gap that is traversed by the road from Port-au-Prince to Miragoâne, where the crest of the gap is about 180 meters above sea level. Tapion de Miragoâne rises to an altitude of about 600 meters above sea level. It has a serrate crest and steep slopes. The south slope is shorter and steeper than the north slope. It is separated from the mountains to the south by a deep, narrow trough, the western part of which contains Étang de Miragoâne. The eastern part of the trough drains into Baie de Petit-Goave, but the lake drains northward. The floor of the trough consists of basalt, which is in places covered with alluvium. The trough apparently coincides with the crest of an anticline, and the steep southward slope of Tapion de Miragoâne and the similar northward slope of the mountains on the south are interpreted as inward-facing escarpments that have been eroded in the limestone overlying the basalt. The mountains south of the trough rise steeply to an altitude of about 700 meters above sea level and are deeply dissected by V-shaped ravines.

From Miragoâne westward to Baie des Baradères the coast is bordered by an emerged terrace, back of which is an irregular mountain mass. From

Miragoâne to Anse-à-Veau these mountains apparently are composed of limestone. They rise to a maximum altitude of about 800 meters above sea level. From Anse-à-Veau to the valley of Rivière des Baradères the mountains are composed of limestone and basalt and other volcanic rocks. Along the south coast of Baradères Bay mountain ridges extend down to the coast. The mountain crests that are composed of limestone rise in sharp peaks and cliffs above the more gentle slopes that have been eroded on volcanic rocks.

INTERIOR.

East of the gap traversed by the road from Miragoâne to Aquin the interior of the eastern part of the massif consists of mountain ranges rising to a maximum altitude of perhaps 1,500 meters above sea level. South of Grand-Goave the highest peak has an altitude of 1,340 meters above sea level. South of Petit-Goave and Miragoâne the crest of the mountains lies in the central part of the peninsula, but farther west it is close to the south coast.

North of the crest the road from Miragoâne to Aquin follows a narrow depression about 15 kilometers long, called the Fond-des-Nègres, the central part of which has an altitude of about 260 meters above sea level. The depression trends almost westward, parallel to the trend of the structural features, and in general it closely resembles the trough south of Tapion de Miragoâne. It probably represents the eroded crest of an anticline and has inward-facing escarpments of limestone. The basaltic rocks in the floor of the depression are largely concealed by alluvium. Between Fond-des-Nègres and the Aquin Plain the road follows the lowest gap (altitude 300 meters) in the crest of the Southern Peninsula. The Colline Valley is a narrow depression in the mountains east of the gap. As seen from a distance it resembles the Fond-des-Nègres.

ASILE VALLEY.

The Asile Valley is an interior lowland surrounded by rugged mountains. It probably is partly outlined by faults. The valley trends westward, parallel to the main structural features. The valley is at least 12 kilometers long and 3 kilometers wide. Its western and central parts are drained by Rivière des Pins, which flows eastward to l'Asile and is joined by the westward-flowing Rivière Serpent, which drains the eastern part. The two streams form the Grande Rivière des Nippes, which flows northward through the mountains in a deep gorge. The floor of the valley slopes from an altitude of 250 or 300 meters near the western end to an altitude of about 125 meters above sea level at l'Asile. Poorly consolidated and gently folded detrital rocks of Miocene age underlie the valley.

The lower eastern part of the valley is a rolling lowland that has a maximum relief of 50 meters. The hills, which generally consist of rather hard beds, are smooth and rounded but are truncated by bluffs, 5 to 15 meters

high, along the streams. The higher western part is a plateau underlain by coarse, poorly consolidated conglomerate and is deeply trenched by stream channels along which bluff or talus slopes reach a height of 100 meters. This relief is the result of an increasingly greater depth of erosion to the west. The western border of the plateau appears to abut against the high ranges of the Montagnes de la Hotte.

The rugged mountains on the south side of the valley rise steeply to an estimated altitude of 800 meters above sea level. The trail from l'Asile to Cavaillon crosses their crest at an altitude of 500 meters above sea level. The trail from Aquin to l'Asile follows a lower pass that has an altitude of 300 meters above sea level. Rivière Serpent enters the valley through a gorge on the east. The mountains on the north side of the valley are not so rugged as those on the south side. The trail from l'Asile to Anse-à-Veau crosses their crest at an altitude of 325 meters above sea level.

SOUTH SLOPE.

From Jacmel westward to Bainet the mountain ridges on the south slope of the massif trend southeastward toward the coast. The trail from Jacmel to Bainet crosses the crest of the first ridge at an altitude of 430 meters above sea level. Morne Laporte, southeast of the trail, rises about 50 meters higher. Along the trail the crest of the ridge is flat. Northeast of the crest there is a plateau that stands about 300 meters above sea level, the edge of which slopes down steeply to the alluvial plain at Jacmel. About 15 kilometers northwest of Morne Laporte the crest of the ridge attains an altitude of about 1,000 meters above sea level, but the trail from Grand-Goave to Bainet crosses the crest at an altitude of 720 meters above sea level. Near the coast a dissected plateau that has a gentle seaward slope borders this ridge. The inner edge of this coastal plateau has an altitude of about 100 meters above sea level, but isolated hills rise 50 meters higher. The seaward edge of the plateau is a degraded sea cliff, the foot of which has an altitude of 40 or 50 meters above sea level. The plateau probably represents a plain that was being base-leveled during the time when the sea cliff was cut. The base of the degraded sea cliff is the inner edge of an emerged coastal terrace that slopes seaward to a much fresher and more persistent sea cliff about 10 meters high, which is one of the most conspicuous features along the coast between Jacmel and Côtes-de-Fer. The base of this cliff has an altitude of 20 meters above sea level and forms the inner edge of a lower emerged coastal terrace. Both of these emerged terraces show clearly in a profile view of Cap Bainet, where they have a maximum width of 1 kilometer.

Between Mayette and Bainet a dissected plateau extends inland from the lower terrace for a distance of about 5 kilometers. The inner edge of the plateau has an estimated altitude of 75 to 100 meters above sea level and slopes seaward to an altitude of about 50 meters. It is separated from the mountains by an interior valley that strikes a little north of west.

The eastern part of the valley is drained by a gorge that cuts across the plateau north of Cap Raymond and the western part by a similar but smaller gorge about 5 kilometers east of Mayette.

Flat-topped hills near Côtes-de-Fer that have an altitude of 40 to 50 meters above sea level probably are isolated remnants of the upper emerged coastal terrace. Their crests slope seaward, and they are covered with a veneer of soft coralliferous limestone and imperfectly consolidated gravels. Deeply incised dry stream channels drain southward between the hills. Near Mayette the dissection is even greater.

Between Côtes-de-Fer and Flamands Bay the south slope of the mountains is separated from the shore by a coastal plain, the central part of which has a maximum width of 8 kilometers and is called the Lhomonde Plain. Near the shore this plain is about 8 meters above sea level and apparently corresponds to the seaward part of the prominent lower terrace east of Côtes-de-Fer. Dry stream channels are intrenched in flood plains 5 meters below the surface of the plain. Toward the interior the surface of the plain is more irregular and is broken by low hills, but whether there is an emerged sea cliff at the rear of the plain is not known.

Between Flamands Bay and the Aquin Plain low irregular hills composed of limestone of Eocene age extend down to the shore. They have a maximum altitude of 300 meters above sea level. From this locality westward to the Cayes Plain the surface features of the south slope of the massif are entirely different. The crest of the peninsula approaches the south slope and the rugged mountains extend almost or quite to the shore line. At the eastern extremity of this region the alluvial Aquin Plain separates the mountains from the shore. Small streams are intrenched several meters in the alluvial gravels and silt on the plain. South of Vieux-Bourg d'Aquin a low hill rises above the surface of the plain.

From the Aquin Plain westward to the Cayes Plain the rugged mountains south of the Asile Valley extend down to the shore line. Spurs along the coast have an altitude of 150 to 200 meters above sea level. The crests of the mountains and of the spurs along the coast generally are composed of limestone, but basaltic volcanic rocks, which underlie the limestone, are exposed on the lower slopes of the mountains and in the valleys. The slopes cut in limestone are steeper and more rugged than those cut in the volcanic rocks and at many localities are scarred by cliffs. Rivière de St.-Louis flows through a deep gap in the coastal range.

WESTERN PART.

NORTH SLOPE.

The north slope of the western part is mountainous, but most of the peaks have an altitude of less than 800 meters above sea level. The mountains generally trend a little north of west or north of east. They are

composed principally of limestone of Eocene age. The slopes are steep and are in many places broken by cliffs, and most of the valleys are deep and narrow, but this region is not so inaccessible as the Montagnes de la Hotte. Near Corail and Pestel large areas of karst topography contain sink holes of enormous size. The limestone in these areas yields on weathering red clay, which is protected from surface erosion, as the drainage is underground, and forms smooth, flat uplands, gentle slopes and level sink-hole fillings, thus modifying the relief that characterizes most regions in the Republic where limestone is the surface rock.

Several small interior lowlands resemble on a reduced scale the Asile Valley. The largest on the north slope is on the Grande Rivière de Jérémie. This lowland is about 3 kilometers wide and at least 7 or 8 kilometers long, but its eastern boundary is not known. It is underlain by folded marl and firmly consolidated conglomerate of Miocene age. The marl crops out in rolling rounded hills, but the conglomerate forms distinct eastward-trending ridges. The river is intrenched about 10 meters below the surface of the lowland in a flood plain that has a maximum width of 1 kilometer. A similar but smaller interior lowland is on the Bras-à-Droit de la Grande Rivière de Jérémie below Chambellan. It is less than 4 kilometers long and 2 kilometers wide. Another interior lowland that may be the eastward prolongation of the one on the Grande Rivière de Jérémie probably lies south of Les Roseaux.

INTERIOR; MONTAGNES DE LA HOTTE.

The name Montagnes de la Hotte is here used to include several high mountain ranges in the interior of the western part of the massif and on the south slope west of the Port-Salut Peninsula. The high range immediately north of Tiburon Bay and the valley of Rivière de Tiburon is called the Montagne de Tiburon, but most of the ranges are unnamed.

The Montagnes de la Hotte generally consist of at least three parallel ranges trending almost westward. They are the highest ranges in the massif. The central range is apparently the highest. Only the southern, western, and northern margins of these ranges were examined. Mont la Hotte, the highest peak, stands about 2,000 meters above sea level.¹ Little is known of the surface features of the central ranges. These mountains must be very rugged, as no trails that can be used by pack animals cross this part of the massif, and they are rarely crossed even on foot. The ranges on the south slope rise abruptly to altitudes of about 1,000 meters above sea level within a short distance from the coast.

The ranges on the south slope and the central ranges along the west coast consist principally of basaltic volcanic rocks and overlying Eocene limestone. Large areas in the interior ranges apparently consist of older

¹ On the Thomasset map the altitude of this peak is shown as 2,255 meters. The altitudes shown on this map for other points are too great.

rocks. At many localities the crests of the ranges consist of limestone and the lower slopes of basalt. Here as in other regions the limestone slopes are very steep and rugged, and dip slopes terminate in abrupt escarpments. The foothills that consist of basalt are generally less rugged.

The Camp Perrin Valley, in the eastern part of the Montagnes de la Hotte, is an interior lowland similar to those on the north slope and to the Asile Valley. It is perhaps 20 kilometers long and has a maximum width of 3 kilometers. It is floored with Miocene rocks, like the other interior lowlands.

SOUTH SLOPE.

CAYES PLAIN.

The Cayes Plain is the only large coastal plain in the Southern Peninsula west of the Léogane Plain. It extends northwestward from Cayes Bay for a distance of 20 kilometers and has a width of 15 to 20 kilometers. The plain is covered with alluvium. At its northwest extremity the altitude of the plain is about 100 meters above sea level, and the surface slopes gently southeastward to the sea. In the northern part small isolated hills consisting of limestone of Miocene age rise above the plain. The slopes of the hills are steep, but their crests usually are rounded. The gently sloping surface of the plain is trenched by several rivers, which flow southeastward. Near the mountains at the head of the plain the trenching reaches a depth of 10 to 15 meters, but near the coast it is only 2 to 5 meters.

PORT-SALUT PENINSULA.

The Port-Salut Peninsula extends southeastward from the foot of the Montagnes de la Hotte west of the Cayes Plain and Cayes Bay. The name is derived from that of the largest town on the peninsula, Port-Salut. The peninsula is about 20 kilometers long and 10 to 12 kilometers wide. The surface rocks in the central part of the peninsula are thin-bedded limestones of Eocene age. This limestone is fringed by younger coralliferous limestone.

The interior of the peninsula is a strongly dissected plateau. Many rounded hills of accordant height indicate that the surface of the plateau stood about 300 meters above sea level. The relief is about 100 meters. The valleys between the hills have smoothly curving sides. The rounded hills and open valleys of the peninsula are strongly contrasted to the steep, rugged slopes and deep V-shaped valleys in the Montagnes de la Hotte, where part of the Eocene limestone is massive. The slope from the eastern edge of the plateau facing the Cayes Plain is very abrupt and is deeply furrowed by narrow ravines. This steep plateau face probably is an eroded fault scarp.

Coralliferous limestone of Quaternary age extends around the coast of the peninsula and covers several emerged coastal terraces, which slope

seaward and are backed by emerged sea cliffs. At Anse à Juif, on the west coast, emerged terraces were seen at altitudes of 20, 40, and 50 meters above sea level. Near Port-Salut the lowest terrace stands at an altitude of 10 meters above sea level and the next higher one at an altitude of 20 meters. At some localities the coralliferous limestone extends up to an altitude of about 100 meters above sea level, but the highest terraces are not so well preserved as the lower ones.

DRAINAGE.

The crest of the peninsula is the main divide from which streams flow into Gonave Gulf to the north and into the Caribbean Sea to the south. Between Jacmel and Aquin the south slope is poorly watered and has few through-flowing streams. Some of the streams are adjusted to the structure. Rivière des Pins flows eastward along the strike of the rocks and Rivière Serpent westward. Rivière de Cavaillon, which is the largest stream on the south slope of the massif, drains a long, narrow interior valley that trends southeastward and finally escapes southward through a series of narrow gorges across the coastal ranges. At the western end of the peninsula Rivière Tiburon and other smaller streams flow westward in courses that are approximately parallel to the structural trend. Grande Rivière de Jérémie flows northeastward for a long distance in a strike valley underlain partly by Eocene limestone and partly by the Miocene beds of the interior lowland. The stream pierces the high ridges of Eocene limestone on the north side of the lowland in narrow, steep-walled gaps.

SHORE FEATURES.

The littoral and sublittoral features of the different parts of the Massif de la Hotte are related to the surface features of the interior, but for convenience they are described in order from Grand-Goave westward around the extremity of the peninsula and then eastward along the south coast to Jacmel.

NORTH COAST.

The steep northward slopes of Tapion du Petit-Goave and Tapion de Miragoâne are truncated along the shore line by bold sea cliffs. Petit-Goave Bay may be interpreted as a submerged valley that has been partly filled. The irregular reentrants on the east side of Miragoâne Bay, which are separated by cliffed promontories, indicate slight submergence.

A shore of emergence extends from Miragoâne westward to Baradères Bay. The shore line is straight and is bordered by a nearly continuous sea cliff, which is at most places less than 10 meters high. This sea cliff is the seaward face of an emerged terrace covered with coralliferous limestone of Quaternary age. The maximum altitude of the terrace near Anse-à-Veau is 15 to 20 meters above sea level, and its width is 1 to 2

kilometers. The altitude of the terrace gradually decreases westward and more rapidly eastward. At Petit-Trou de Nippes, near Baradères Bay, it drops down to sea level. Along the west side of Miragoâne Bay the terrace is represented by the mud flats and mangrove thickets that lie in front of abandoned sea cliffs. The few streams that cut across the terrace are incised to sea level. The channel of the tidal stream at Anse-à-Veau is very narrow.

Between Petit-Trou de Nippes and Corail the shore line is very irregular. Baradères Bay and Cayemites Bay, two extensive bodies of water, are partly inclosed by the Bec du Marsouin Peninsula and the island Grande Cayemite. The shore line on the south sides of Baradères Bay and Cayemites Bay is bordered by short, high cliffs that truncate steep slopes of limestone of Eocene age. As wave cutting is not very effective in these sheltered bays, it seems that the cliffs may be due to the undermining and solution of limestone along the underground streams that emerge as springs on the shore. The exposed parts of the Bec du Marsouin Peninsula and Grande Cayemite are truncated by sea cliffs about 10 meters high. An emerged terrace that has the same altitude as the terrace east of Petit-Trou de Nippes borders the northeastern extremity of the peninsula and probably extends along the north coast of the peninsula and of Grande Cayemite. The shore features in this region may be due to the submergence of an area of karst topography followed by emergence of the northern part similar to the emergence of the shore from Petit-Trou de Nippes eastward to Miragoâne.

Between Corail and Jérémie the coast is low and is bordered by a narrow fringe of alluvium. Discontinuous remnants of a narrow terrace veneered with coralliferous limestone of Quaternary age extend from Les Roseaux to Jérémie. At Les Roseaux the outer edge of the terrace is less than 5 meters above sea level. At Jérémie the Quaternary limestone does not form a well-defined terrace but extends as irregular patches up to altitudes of at least 25 meters above sea level.

Similar remnants of recently emerged Quaternary limestone probably extend westward from Jérémie, but the coast rapidly takes on the features of the west coast, and cliffed promontories that are separated by bay head beaches become prominent.

WEST COAST.

The west coast of the Southern Peninsula is extraordinarily rugged, particularly from Les Irois to Tiburon. Spurs extending to the shore line are truncated by bold cliffs that have a maximum height of 100 meters. Between the cliffed promontories are small bays with bay-head beaches. Some of the bay-head beaches—for example, the one south of Anse-d'Hainault—inclose small marshes. This rugged coast is interrupted at Tiburon by a narrow alluvial plain bordered by a gravel beach that obstructs the discharge of the small flow of Rivière Tiburon.

SOUTH COAST.

East of Anse du Milieu the shore abruptly takes on features indicating emergence. A low hill at Pointe des Aigrettes, which has an altitude of about 15 meters above sea level, is capped by limestone, probably of Quaternary age, such as is common along the coast east of Les Anglais. A low emerged beach composed of sand and gravel is a conspicuous shore feature between Anse du Milieu and La Cahouane. The altitude of the beach is 3 to 4 meters above sea level, and it is backed by a low terrace composed of beach gravel, which at some places slopes toward the foot of the mountains. The width of the terrace is 1 to 2 kilometers. At its western end a tidal inlet leads into an area of salt marshes and mangrove thickets.

The coast between La Cahouane and Les Anglais resembles the coast north of Tiburon, as cliffed promontories that are not veneered with Quaternary limestone are the most conspicuous shore features.

The coast between Les Anglais and Anse à Juif has a general north-westerly trend, diagonal to that of the structural trend, as is shown by the many small segments that trend almost eastward, so that the shore consists of many right-angled turns. These segments are the terminations of mountain ranges that rise steeply to altitudes of 700 meters or more above sea level. The ruggedness of the coast is generally modified by a narrow fringe of low foothills or by distinct terraces veneered with Quaternary limestone that probably extends up to an altitude of 100 meters above sea level. The highest terraces can hardly be distinguished. On the north side of Anse à Drick there is a distinct terrace that has an average width of 50 meters and an altitude of 20 meters above sea level. At the landward side of the terrace there is a sea cliff about 10 meters high, above which probably rises another terrace, although the slope is rather steep. At the shore line the terraces are truncated by sea cliffs 10 to 30 meters high. Many small streams from the mountains cut across the terraced coast, and the remnants of the terraces are separated by small alluvial plains. Sandy beaches and bars obstruct the mouths of the streams at the seaward margin of these plains. At several localities an emerged beach 2 or 3 meters above sea level, similar to the emerged beach west of La Cahouane, is conspicuous.

The entire shore of the Port-Salut Peninsula is straighter and more uniform than the shore to the west, and the features of a shore of emergence are more continuous. The emerged coastal terraces in this region are described on p. 413. The lowest terrace has a seaward sea cliff 2 to 8 meters high. The mouths of most of the streams that are entrenched in the terraces are closed by bars, and the water discharges beneath the surface. On the west side of the peninsula the bars apparently are built by currents moving southward. Some of the streams flow a considerable distance parallel to the beach inside the bar before finding an outlet.

The shore of the Cayes Plain is straight except for the small indentations at the mouths of the many small streams that enter the bay. The

alluvium that covers the plain is usually truncated at the shore line by cliffs 1 or 2 meters high. The plain is being extended seaward on the shallow platform embracing Cayes Bay and Ile-à-Vache. This coast lies between a shore line of emergence on the southwest and a shore line of submergence on the northeast.

The features of the shore line from the northern border of the Cayes Plain eastward to Aquin indicate submergence. Its outline is very irregular and includes many deep bays with bayhead beaches. The bays are separated by cliffed promontories, along the sides of which there are bay-side beaches and mangrove thickets between short, high sea cliffs.

From the east side of Aquin Bay eastward to Jacmel the shore line is relatively straight and the features indicate emergence. The coastal plain that extends eastward to Côtes-de-Fer is bordered by low sea cliffs or by beaches that lie in front of an eroded low sea cliff. Between Côtes-de-Fer and Jacmel stretches an almost continuous sea cliff that has a height of about 15 meters. (See pp. 409-410.) Bainet Bay, a structural depression, indents the coast.

SUBLITTORAL FEATURES.

NORTH COAST.

Between Grand-Goave and Miragoâne the width of the sublittoral platform, as limited by the 20-fathom line, is less than 1 kilometer, except at Petit-Goave Bay and Miragoâne Bay. Neither of these bays lies in a plunging syncline, as do so many bays in the Republic, a fact shown by the outline of the 20-fathom line. At Petit-Goave Bay the 20-fathom line extends directly across the entrance, and at Miragoâne Bay it is only slightly indented. The features of the two bays support the conclusion that the littoral and sublittoral features are due to slight submergence, although the soundings are not extensive enough to substantiate the conclusion.

Between Miragoâne Bay and Baradères Bay the sublittoral platform is extremely narrow, as would be expected on a shore of emergence.

The sublittoral platform embraces the extensive bodies of water that are called Baradères Bay and Cayemites Bay. The 20-fathom line is indented at the east end of both bays, but the platform on the outer sides of Bec du Marsouin Peninsula and Grande Cayemite is very narrow. The outer margin has the features of a shore of emergence, but apparently the bays owe their outline to earlier submergence. Westward from the west end of Cayemites Bay the sublittoral platform along the north coast is very narrow, but it gradually widens.

WEST COAST.

An extensive triangular sublittoral platform extends westward from the west coast between Cap Dame-Marie and Cap Tiburon. The apex of the platform is 24 kilometers west of Cap des Irois, the western extremity on

the coast. Figure 25, *A*, a profile of this platform, shows that on this exposed coast the maximum depth of effective wave erosion is only 15 fathoms. This wide abrasion platform indicates that the adjacent coast has stood still for a long time or has very slowly subsided. The littoral and sublittoral features of the Southern Peninsula are entirely different from those of the Northwest Peninsula and indicate a correspondingly different geologic history.

SOUTH COAST.

Between Cap Tiburon and the southeast end of the Port-Salut Peninsula the 20-fathom line parallels the shore and embraces a narrow sublittoral platform. A curious bilobed indentation of deeper water extends into the platform on the south side of the Port-Salut Peninsula. Along the south

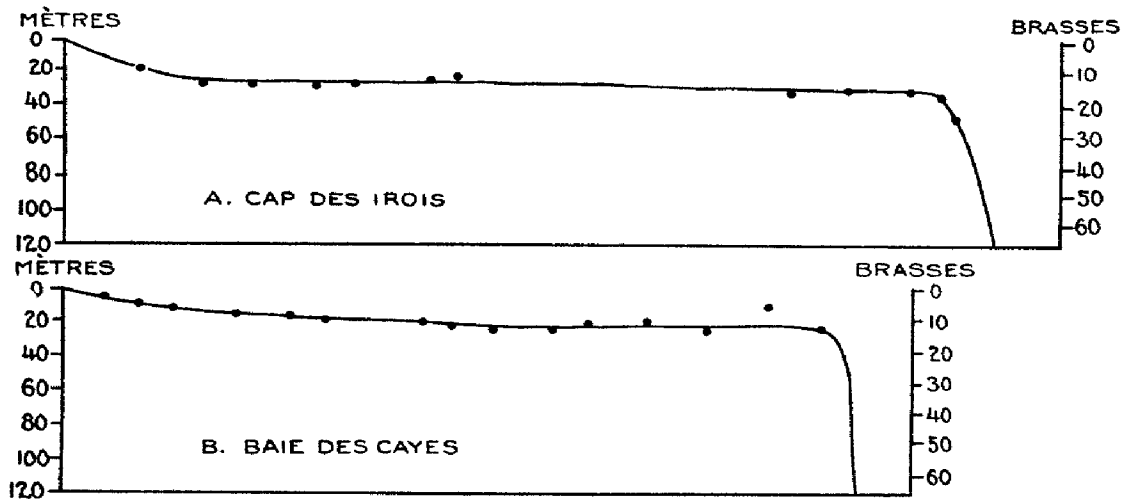


FIGURE 25.—Subaqueous profiles off the west and south coasts of the Southern Peninsula.

Horizontal scale 1 : 250,000 ; vertical scale exaggerated 50 times.

side of this peninsula the offshore slope from the edge of the platform is very steep. A depth of 1,900 fathoms (3,475 meters) is recorded 12 kilometers south of the southwest end of the peninsula.

An extensive sublittoral platform extends from the southeast end of the Port-Salut Peninsula and embraces Cayes Bay and Ile-à-Vache. Figure 25, *B*, is a profile of this platform drawn southeastward from l'Acuil. The depth of water on the platform is less than 15 fathoms (27 meters) except in the channel north of Ile-à-Vache, where it is a little more than 20 fathoms (36 meters). A ridge extends southeastward from Les Cayes to Ile à Vache and along the north side of that island. Along this ridge numerous reefs lie awash and small cays rise above the surface of the water. The channel on the north side of this ridge probably is a submerged stream channel extending out from Cavillon Bay. The littoral and sublittoral features of the coast from Les Cayes eastward to Aquin

indicate submergence. The slope from the outer edge of the platform is very steep. A depth of 2,130 fathoms (3,895 meters) is recorded 12 kilometers southeast of the southeast end of Ile à Vache.

From Aquin Bay eastward to Côtes-de-Fer the sublittoral platforms decrease in width. The outline of the 20-fathom line is more irregular than the shore line. East of Côtes-de-Fer the platform is narrow, and its outer edge closely parallels the shore line. At Bainet Bay the 20-fathom line is deeply indented parallel to the indentation of the shore line.

GONAVE ISLAND.

GENERAL RELATIONS.

Gonave Island is the largest outlying island embraced by the Republic of Haiti. It has a length of 57 kilometers and a maximum width of 15 kilometers. The axis of the island extends from northwest to southeast, almost paralleling the shore and the structural features of the mainland from Cap St.-Marc southeastward to the Cul-de-Sac Plain. The average width of the channel on the northeast side of the island, St.-Marc Canal, is 20 kilometers. The width of Gonave Canal, on the south side, increases from 27 kilometers at the southeast end of the island to 44 kilometers at the northwest end.

LAND FEATURES.

Structurally the island is an asymmetric anticline, the crest of which plunges both northwestward and southeastward. Some of the most striking surface features are due to the solution of limestone, which is the only surface rock on the island. The island may be divided into two almost equal parts, having different kinds of surface features. The southeast half is more rugged and has a greater variety of surface features than the northwest half.

SOUTHEAST HALF.

The southeast half of the island contains a ridge along the south coast, an interior dissected plateau at an altitude of 300 to 500 meters above sea level, and a dissected plateau along the north coast extending from sea level to an altitude of 300 to 400 meters above sea level.

RIDGE ALONG SOUTH COAST.

A high ridge near the south coast, extending from the longitude of Picmi to a locality northwest of Pointe à Raquette, is the most conspicuous surface feature of the southeastern half of the island. This ridge coincides with the crest of the Gonave Island anticline. The eastern part of the ridge is narrower than the western part. Along its entire length the crest is flat and several hundred meters wide. The central part of the ridge is more eroded than the extremities. The highest knobs on the crest of the