

DESCRIPTION DU TERRITOIRE DE LA FEUILLE DES ÎLES DE LA MADELEINE - 11N

EMPLACEMENT ET AMÉNAGEMENT

Les îles de la Madeleine sont situées dans le golfe Saint-Laurent entre $61^{\circ} 8'$ et $62^{\circ} 13'$ de longitude ouest et $47^{\circ} 12'$ et $47^{\circ} 51'$ de latitude nord. L'archipel s'étend dans une direction nord-est à quelques 160 milles de Gaspé et à 65 milles de l'île du Prince-Édouard.

Épousant la forme d'un hameçon, l'archipel des îles de la Madeleine est formé principalement par un groupe de sept îles reliées les unes aux autres par des flèches de sable ou tombolos; ce sont: l'île du Havre Aubert, l'île du Cap aux Meules, l'île du Havre aux Maisons, l'île au Loup, la Grosse île, l'île de l'Est et l'île de la Grande Entrée. Séparées du groupe principal se trouvent l'île de l'Entrée à 6 milles au nord-est de Havre-Aubert et l'île Brion et le Rocher aux Oiseaux respectivement à 13 et 20 milles au nord de la Grosse île.

L'archipel des îles de la Madeleine est entouré de hauts-fonds et de récifs qui ont été, d'ailleurs, la cause de nombreux naufrages.

Dans l'ensemble, les îles ont toutes une topographie à peu près similaire, légèrement ondulée à accidentée et qui, pratiquement, se divise en quatre unités distinctes. On remarque, en premier lieu, un noyau central formé de multiples collines arrondies atteignant, sur l'île de l'Entrée, une altitude de 560 pi. Le noyau de l'île du Havre Aubert s'élève à 480 pi, celui de l'île du Cap aux Meules rejoint la côte à 530 pi et celui de l'île du Havre aux Maisons en atteint 360.

Renfermant des formations de gypse partiellement dissous, la deuxième unité comprend le flanc des collines et offre un relief généralement ondulé et caractérisé par des dépressions en forme d'entonnoir. Ces dépressions parfois remplies de petits lacs peuvent atteindre jusqu'à 100 pi de profondeur.

On observe, en troisième lieu, à quelques 50 pi d'altitude, un plateau légèrement ondulé qui s'étend sur le pourtour des îles; des falaises sculptées par la mer le terminent souvent.

Enfin, les dunes, les flèches et les tombolos qui relient les îles entre elles, représentent la quatrième unité.

Les îles de la Madeleine sont formées de roches sédimentaires et de roches volcaniques. Sanschagrin (1964) y reconnaît deux formations distinctes: la formation Cap-aux-Meules et la formation Havre-aux-Maisons comprenant le membre Bassin-aux-Huitres et le membre Cap-Adèle.

D'origine sédimentaire, la formation Cap-aux-Meules appartient à la période permo-carbonifère. Elle est constituée de grès rouge et gris-vert. Ces roches forment le plateau qui entoure les îles.

La formation Havre-aux-Maisons est d'âge mississippien. Le membre Bassin-aux-Huitres est composé de roches sédimentaires telles que le calcaire et le schiste calcareux fossilifère, l'argilite rouge et grise, et le gypse. Ce groupe de roches ne se rencontre que sur l'île de la Grande Entrée. Le membre Cap-Adèle est constitué de roches volcaniques et sédimentaires. On y trouve le basalte bréchique, le tuf, et l'agglomérat interstratifié de conglomérat, le grès, le silstone, le calcaire et le schiste calcaieux fossilifère, l'argilite et le gypse. Le complexe volcanique forme les noyaux centraux des îles tandis que les roches sédimentaires se situent en contrebas de collines.

CLIMAT

Situées dans le golfe Saint-Laurent, les îles de la Madeleine ont un climat tempéré froid à forte influence maritime. La température annuelle moyenne se situe près de 40°F , celle du mois de juillet de 62° et celle du mois de janvier de 21° . A Cap-aux-Meules la longueur de la période sans gel est en moyenne de 161 jours. La précipitation annuelle moyenne varie autour de 35 po et est assez bien répartie au cours de l'année. Le vent est sans contredit le facteur écologique le plus important. En effet, les îles sont constamment balayées, surtout l'hiver, par des vents violents venant de presque toutes les directions. Leur effet sur les sols et la végétation est très marqué; cette dernière, entre autre, devient en certains endroits rabougrie, voire inexiste. Dans l'établissement des classes d'aptitudes des sols pour la forêt, la sous-classe «U» est utilisée presque systématiquement.

POSSIBILITÉS FORESTIÈRES

La forêt des îles de la Madeleine occupe 25% du territoire dont 15% peut être considéré comme économique. Les meilleurs peuplements se situent dans l'île du Havre Aubert et sont confinés aux vallées protégées du vent.

Satisfaisant les fins du travail, on a retenu la série physiographique suivante: végétation herbacée et arbustive dans les prés salés et les bas marais, pessière-sapinière à lichens sur les dunes, pessière à kalmia sur le plateau gréseux, pessière à spaghne sur tourbe oligotrophe et alluvions mal drainées, sapinière à épinette blanche commerciale en contrebas des collines sur formation sédimentaire de schiste, d'argilite et de calcaire, sapinière à épinette blanche de mauvaise venue sur les collines volcaniques.

Prés salés et bas marais — Les prés salés et les bas marais sont presque continuellement inondés et n'offrent pour l'instant aucune possibilité forestière. Ces étendues sont classées 7^u.

Pessière-sapinière à lichens — Peuplement rabougrí d'épinette et de sapin, de faible densité, qui colonise les dunes fixées. Le sol est un podzol ferro-humique placique et humus est un mor. Les dunes mobiles n'ont ni végétation forestière, ni profil de sol. Dans l'ensemble, c'est un milieu très pauvre, très exposé au vent et qui n'a aucune valeur forestière. Elles ont cependant un attrait touristique important. Les dunes sont regroupées dans la sous-classe 7^u.

Pessière à kalmia — L'épinette noire domine dans ce peuplement. On y trouve ici et là comme espèces associées le sapin baumier et le bouleau blanc. Développé à partir de grès rouges, le sol est peu fertile et le drainage, quoique généralement bon, peut devenir imparfait. Le profil appartient au sous-groupe des podzols ferro-humiques placiques ayant comme humus un mor très acide. L'accroissement annuel moyen est très faible et cette association fait partie de la sous-classe 6^u.

Sapinière à épinette blanche — Le sapin baumier domine, associée à l'épinette blanche et, quelquefois, au bouleau blanc. Ce groupement se retrouve au centre des principales îles, c'est-à-dire, sur les collines volcaniques et leurs contrebas formés de roches sédimentaires. Les variations de la topographie et de la roche mère, à l'intérieur de cette association, impliquent une certaine variété dans les sols et conséquemment dans les rendements en volume ligneux.

Les meilleurs peuplements observés se situent dans les vallées protégées du vent de l'île du Havre Aubert. Dérivés de schiste et de calcaire les sols sont assez fertiles et ont un bon pouvoir de rétention en eau. Le type génétique de sol le plus fréquent est un podzol humo-ferrique orthique quoiqu'il n'est pas rare de rencontrer des brunisols dystriques orthiques ou dégradés. Le drainage varie de bon à modérément bon. Dans ces conditions, la sapinière à épinette blanche peut atteindre un accroissement annuel moyen de 75 pi cubes à l'acre et la classe 3 lui a été attribuée. Sur les mêmes sols mais dans des endroits plus exposés au vent la sous-classe 4U est retenue.

Les sols dérivés des formations volcaniques ont une texture plus grossière et contiennent beaucoup plus de pierres. Sur les moyens versants, le sol est généralement un podzol humo-ferrique orthique avec un humus du type mor. On note également la présence de quelques brunisols dystriques dégradés ayant comme humus un mull mince (moins de deux po d'épaisseur). Ces sols sont classés 4^u dans les endroits bien drainés et 4^w où le drainage est imparfait.

Sur les hauts versants et les sommets des collines la sapinière à épinette blanche est de mauvaise qualité. En plus d'être très exposés au vent, les arbres croissent sur un sol mince et pauvre en éléments nutritifs. Le drainage varie de bon à excessif. Le sol est généralement un podzol humo-ferrique orthique et parfois un réglosol lithique. L'humus est un mor feutré mince. Ce milieu ne permet qu'un accroissement annuel moyen faible et fait partie de la sous-classe 5^u.

Classement des possibilités par J.L. Carrier et J.L. Blouin du Service de la recherche du ministère des Terres et Forêts du Québec. Description par J.L. Carrier en 1972.

RÉFÉRENCES

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GENERAL DESCRIPTION OF THE ÎLES DE LA MADELEINE MAP SHEET AREA, 11N

LOCATION AND DEVELOPMENT

The area covered by the îles de la Madeleine map sheet is in the Gulf of St. Lawrence between $61^{\circ} 8'$ and $62^{\circ} 13'$ west longitude and $47^{\circ} 12'$ and $47^{\circ} 51'$ north latitude. The group of islands lies about 160 miles southeast of the Gaspé Peninsula and 65 miles from Prince Edward Island.

The fishhook-shaped archipelago of the îles de la Madeleine is composed mainly of a group of seven islands connected by sand spits or loops, including Havre Aubert Island, Grindstone Island, House Harbour Island, Wolf Island, Grosse Isle, East Island, and Grand Entry Island. Three islands detached from the main group are Entry Island, 6 miles northeast of Havre Aubert Island, and Brion Island and Birds Rock, which are located 13 and 20 miles north of Grosse Isle respectively.

The îles de la Madeleine are surrounded by shoals and reefs, which have caused many shipwrecks.

Generally, the islands have similar topography, slightly uneven or hilly, which can be divided into four separate divisions. The first division is a central core composed of numerous round-backed hills, which reach an altitude of 560 feet on Entry Island. The cores of Havre Aubert Island, Grindstone Island, and House Harbour Island reach maximum altitudes of 480, 530, and 360 feet respectively. The second division is the hillsides, which contain partially liquefied gypsum formations. The hillsides have a basically uneven contour characterized by funnel-shaped depressions, which sometimes reach depths of 100 feet and are often filled with small lakes. The third unit consists of slightly uneven plateaus, which cover the periphery of the islands, and are often cut off by cliffs carved out by the ocean. The fourth unit comprises dunes, sand spits, and loops that connect the islands.

The îles de la Madeleine are composed of sedimentary and volcanic rock. Two separate formations are the Grindstone formation and the House Harbour formation, including the Oyster Basin and Cape Adele extensions.

The Grindstone formation, of sedimentary origin, dates back to the Permo-Carboniferous period, and is characterized by red and greyish-green sandstone. These rocks comprise the plateau, which borders the islands.

The House Harbour formation dates back to the Mississippian age. The Oyster Basin extension is composed of sedimentary rocks, such as limestone and fossiliferous calcareous schist, red and grey argillite, and gypsum. This group of rocks is found only on Grand Entry Island. The Cape Adele extension is composed of volcanic and sedimentary rocks. Brecciated basalt, bedrock, and agglomerate interbedded with conglomerate, sandstone, siltstone, limestone, and fossiliferous calcareous schist, argillite, and gypsum are found in this region. The volcanic complex comprises the central core of the islands, whereas sedimentary rocks are located farther down the hillsides.

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