

## The Islands of the Beaver Group

There are nine islands of this group, all politically attached to Charlevoix County. Beaver Island, the largest of the group, and the only inhabited one, has an area of 35,466 acres and is 19 miles west of the nearest point of the Lower Peninsula mainland, a point about five miles north of Cross Village, Emmet County.

Communication with the mainland is through a Coast Guard submarine cable, motor ship and airplane service. The regular scheduled communication is between Charlevoix and St. James, the island's only town. There is daily boat service during summer, and less frequent trips during the spring and fall up to the close of navigation in the winter. There is also daily passenger plane service between Charlevoix and St. James during the summer, weather permitting. During winter months the only scheduled transportation is by airplane. In the "pre-plane" days the only winter time mail service or travel was over ice. There is no established means of transportation to any of the small islands lying off Beaver Island.

The soil and cover of Beaver was mapped and was discussed in a separate report.

Gull Island is the most remote, lying 11 miles west of Beaver Island, and has an area of 240 acres. This island was not mapped because of its remoteness, small size and lack of State ownership.

Slightly nearer than half way between Beaver Island and Gull Island lies High Island with an area of 3,510 acres. This island was mapped and will be discussed later in this report.

Trout Island, with an area of 80 acres lies two miles north of the northwest corner of High Island. This small island, with no state ownership, was not visited.

Garden Island with an area of 4,371.56 acres, lies 1 1/4 miles slightly east of north of the northeastern tip of Beaver Island. This island was mapped and will be separately discussed.

Whiskey Island, with an area of 96 acres, lies about four miles west of Garden Island and Squaw Island with an area of 69 acres lies about three miles northwest of the northwest tip of Garden Island. These two islands have no state ownership and were not mapped.

Hog Island, with an area of 2,071 acres, lies about four miles east of Garden Island and 5 1/2 miles northeast of the northeastern tip of Beaver Island. This island was mapped and will be covered in this report.

Hat Island, with an area of 11 1/4 acres, lies 2 3/4 miles east of northern end of Hog Island and not having state ownership, was not mapped.

In the general vicinity of these islands are several reefs, or bars projecting out of water. The bars above water for most part are sand and of fractional acre size without vegetation, while there are several small islands around Garden and Hog island of 1/2 to 1 acre size having some clumps of woody vegetation. There are large areas of shoal water in this part of Lake Michigan forming rather prolific fishing grounds and the area is quite intensely fished by commercial fisherman.

#### Hog Island

Hog Island has a land area of 2,071 acres of which 212.45 acres or 12% is state-owned. This small irregularly shaped island is largely an outcrop of limestone bed rock with a thin mantle of glacial drift that has been reworked by wave action during higher water levels of Lake Michigan.

During earlier glacial lake Nipissing stages this island was probably either entirely under water or there were two distinct islands with water several feet deep between.

At any rate the highest part of the island is broken or cut by numerous old beach ridges from five to twenty feet in height. The middle third of the island, dividing the north from the south, is swamp or marsh with some parts having been so recently under water that practically no organic Layer has as yet been accumulated on the surface. This area has been cut off from Lake Michigan on the east by present day beach ridge of sand that has been built up as a rather uniformly leveled band of sand eight to fifteen feet above lake level and 50 to 75 yards wide. On the west it is still exposed to storm wave action and considerable area appears to be intermittantly under water.

The northern and southern sections of the island are ringed with present day and later Lake Nipissing beach ridges. The interior appears higher and the smoother areas between the older stage beach ridges have a varying thickness of glacial drift with considerable percentage of angular limestone fragments over bed rock. The thickness of this drift material probably ranges from one to four feet in depth. This part of the island is badly cut up by ridges as well as being stoney and rocky so that the area is not suitable for agriculture.

The older stage beach ridges are made up of both sand and angular rock fragments with ridges of angular material being dominant. This coarse angular gravel is but slightly water worn and most of the pieces are the size of one's hand or smaller. Of the present day beaches there are only two short stretches of sand ridges heaped up, namely along Fisherman's Bay on the northwest part of the island and the larger bay on the east center shore. The rest of the beach is rocky, or bed rock thinly covered with small fragments with water from one to three feet deep extending 100 yards or more from shore.

Apparently no serious attempt to farm was made on this island although maple syrup was made here probably by Indians in earlier times and reportedly by Beaver Island residents in the Nineteen-thirties.

The soil of the island is definitely not adapted to agriculture. The fertility is high over much of the island and there is fair to good moisture conditions under forested conditions but the shallow rocky soil is not adapted to agriculture, even if the economic location of the island were such as to warrant consideration for farming.

The thickness of the organic accumulation over much of the mineral soil in the interior suggests that hot forest fires have been generally lacking and that good forest growth can be expected. The slight depth to bed rock enforces shallow rooting, and suggests danger of much windfall though it may be no greater than on deeper soils.

From 1/4 to 1/3 of the island is swamp and can be expected to produce swamp conifer vegetation for centuries, while cedar is an important tree on the recent beach ridges.

Fisherman's Bay on the northwestern part of the island provides the only moderately good landing spot for small craft. This bay also provides protection from all winds except northwesterers.

The impression around St. James that this island has an especially large population of large water snakes seems to be without factual foundation.

Fox, snowshoe hare, and gray squirrels, are apparently present on this island, though probably in small numbers. There is no indication that deer are present. Small-mouth black bass fishing is reported good along the west coast of the island.

At present there seems to be little to attract the casual tourist to make the 12 mile boat run from St. James to this island except solitude or the bass fishing. It also seems very definite that the only practical use for this island is forestry and recreation.

#### Garden Island

Garden is the largest of the small islands of this group and is reported to have been settled by whites before Beaver Island. It, however, is not inhabited at present.

The total area of the island is 4371.56 acres of which 1858.64 acres or 42% is state-owned.

This island is similar to Hog Island in that it is a bed rock out-crop rising above present lake level with a thin mantle of glacial drift spread over the rock that has in turn been reworked by wave and ice action of higher stages of lake levels during later glacial periods. Glacial boulders are scattered over the island but they are especially conspicuous in the shoal water around the island. Most of the beach of the island is bed rock swept free of glacial material and covered with layers of angular rock fragments in most places, but there are occasional spots where bare bed rock is exposed. There are but few short stretches of sand beach ridges. The highest part of the island was under

water, probably of earlier glacial Lake Algonquin.

The water recession from the highest stages to the present is well marked by a succession of ridges of coarse angular or but slightly rounded limestone fragments and a slight admixture of sandy material.

The interior of the island has several fairly broad, generally smooth areas not broken by beach ridges and a few smoothed off areas of old sand beach that have developed a hardwood sand soil profile. Some of the larger old clearings were on this latter soil situation, but it was soon discovered, as in so many other places in the state, that such soil was too poor for agriculture.

The other portions of the island not badly cut up with old beach ridges have a thin covering of glacial drift over broken bed rock fragments and bed rock. The depth of material varies from one to several feet and the drainage ranges from moderately good to poor. The poorly drained areas in some cases have several feet of peat and much covering over the mineral material, where parts of former Lake Michigan levels have been cut off. Shallow marshy lakes remain in several places in the interior of this island.

It might be feasible to attempt to farm some small portions of the drier parts of this shallow rock soil, but cost of clearing and cost of production would undoubtedly run too high even in a good economic location. It all adds up to the island being definitely not adapted to agriculture.

There is a good landing for small craft in the bay and Indian Harbor on the southwest of the island, with protection from winds of any direction. Commercial fisherman have operated from locations along the eastern shore in the past but these landings lack protection from north or easterly winds. There is no first-class sand bathing beach along the entire island shore. Black bass fishing is reported good in Indian Harbor and there is an Indian cemetery about 1/4 mile from this harbor that is quite a novelty; otherwise there is little in way of tourist attraction at present.

Deer and fox are present on the island in fair numbers and snowshoe hare appear to be numerous.

The conditions are such as to designate the island non-agricultural and the economic location is such that it is a poor site for a commercial fisherman though good fishing grounds are near.

About the only thing there is to offer a vacationist here is isolation.

Thus it seems that the proper use for this island is for forestry and recreational uses.

#### High Island

High Island has a gross area of 3,510.13 acres of which 752.42 acres or

22% is state owned. This island resembles Beaver Island from geological and soils standpoint, being made up of a relatively thick layer of glacial drift. Boulders are numerous and the texture of the material seems to be dominately of sandy clay to clayey sand so that much of the resultant soil is sandy loam to loamy sand over sandy clay at varying depths. The surface of this island has all been reworked by wave action of Lake Algonquin and later lake levels.

The central part of the island is a relatively high plain with loamy sand to sandy loam surface soil with considerable numbers of glacial stone and boulders. This soil ranges from moderately well drained to poorly drained. The best drained parts are too dry and poor for agriculture while some degree of artificial drainage would be needed to farm the more poorly drained parts of the island.

Farming was attempted prior to 1930 but has all been given up. Economic conditions would probably make it impractical to farm here on the best soil in Michigan. The highest plain of the island is separated from the lower parts by an escarpment ranging in height from a few feet to upwards of 150 or more feet on the southwest. In some parts of the west side this escarpment is covered with rather high dunes. Between the escarpment and the lake shore is an area of sandy and gravelly beach ridges of former lake levels. Inter-ridge areas may be wet and dominant areas of this section of the island is well drained.

There is a good landing for ships on the northern part of the eastern side of the island at the old House of David settlement and protection from storms except those of easterly direction. There is 20 feet of water here within 50 yards of shore so that with comparatively low dock construction costs large freighters could load or unload at this island.

There is one inland lake of about 12 acres which has a sand margin for over half of its shoreline, and only a thin deposit of organic matter over sand over the remainder. Fish may be present in this lake but it seems doubtful that they are present in large numbers though the lake appears to be well adapted to perch and pan fish.

Deer do not appear to be present on this island though it seems that the cover should be adapted to deer.

Snowshoe rabbits were not observed, but several gray squirrels were seen. Two fox were seen and signs indicate a fairly large fox population.

Judging from a small apple orchard in the west central parts of the island and on about as good a site as could have been selected, apple tree growth was fair and apple production probably was only fair at the best. The small acreage of land slightly adapted to the fruit trees would not produce enough fruit to pay production costs in this location.

The economic location of the island is such that farming should not be considered as a use even if the soil were suitable.

The beach of the northern half or of sections 28, 29, 32, 33 and 34 is for the most part sand and would make a desirable play or bathing beach. There are but short gravelly stretches of rounded gravel and in the central part of Sec. 34 water reaches directly to the foot of an escarpment 10 to 20 feet high.

There is a pleasant camping site along the beach by the Old House of David Colony; Dunes on the west side of the island are picturesque and for a person with his own boat who likes to be away from crowds this should be an excellent spot.

The cost of getting to the island and lack of source of supplies after getting there makes it an almost impossible vacation for anyone without his own boat.

The best chance for a plane landing strip would be on the west side of the Island where a relatively large clearing on well drained moderately level soil is available. About the only problem here to casual landing of small planes at present would be the presence of scattered boulders and some small brush. Construction of a landing strip nearer the harbor would be more expansive, requiring drainage, or leveling and seeding to prevent blowing.

Summary

	Gross acreage	State-owned acres	Percentage State-owned
Garden Island	4371.56	1858.64	42%
High Island	3510.13	752.42	22%
Hog Island	2071.27	212.45	12%

There are no human inhabitants on any of these islands. Garden Island, the nearest to St. James, receives the greatest use and has the only house in liveable condition. Logs were cut here during the past winter. Twelve head of cattle were pastured on the island last year, eight being lost the past winter, probably due to malnutrition.

Four horses, wild or semi-wild, live on High Island, that are probably worthless as work horses.

High Island has upwards of six miles of sandy beach while the total of sandy beach on Garden and Hog Islands does not exceed one mile. The prospects for timber production is good on all three islands, the main difference being in land area and accessibility of the timber.

Deer are present only on Garden Island. The other two appear suitable for deer. The amount of balsam seems to suggest moose would do well on all of these islands. Fox are probably most numerous on High Island but present on all three. Snowshoe rabbits are numerous on Garden Island though probably present on High and Hog Islands. Several gray squirrels were seen on High Island and may be present on the others.

Soil on Garden and Hog Islands is not suitable for farming purposes. Soil on High Island is not suitable for farming without some artificial drainage and rock removal.

The location of these islands is such that private farm business should not be attempted. Forestry and recreation is their proper use, and probably best under public ownership and supervision at least for some years to come. I would recommend that those Islands be dedicated to public use as a State Forest or Game Area.

C. Wonser

CW:sb  
3/11/46

## COVER DESCRIPTION

The forest cover on the several islands in northern Lake Michigan and Lake Huron is characteristically similar. Therefore, it seems appropriate to discuss the cover for Garden, High and Hog Islands simultaneously.

As may be noted in the table below, mixed hardwoods and softwoods is the cover type most prominent on the three islands. Tree species most common in this type are white birch, aspen, balsam, cedar and spruce. In some places the conifers predominate; in others the poplar-white birch trees are most numerous. The size of the timber in this type runs from 3 to 9 inches in diameter generally. Large acreages could be profitably cut for pulpwood if it were on the mainland near a good market.

### ACREAGE AND PERCENT OF COVER TYPES

COVER TYPE	Garden Is.		High Is.		Hog Is.	
	Acres	Percent	Acres	Percent	Acres	Percent
Mixed hardwoods & softwoods	2843	65	1460	42	896	43
Northern hardwoods	838	19	1068	30	755	36
Poplar-white birch	---	---	320	9	---	---
Conifer Swamp	150	3	---	---	157	7
Miscellaneous*	541	13	662	19	263	14
Total	4372	100	3510	100	2071	100

\* Coastal beach, fields, ponds, marshes, etc.

The northern hardwood type is also prominent on the three islands. About one third of High and Hog islands is covered with hardwoods; somewhat less on Garden Island.

Sugar maple is the predominant species of these hardwood stands. Beech is present on Garden and Hog Islands and very common on Beaver Island; but it is apparently absent from High Island. Scattered, large red oak trees of excellent timber quality occur in the hardwood stands on Hog Island.

The older maple trees on north part of Garden Island and the south part of Hog Island have been tapped extensively in the past. Many tree trunks have become enlarged in healing over the tapping scars made with the axe.

The coniferous swamps are relatively small scattered spots on Garden and Hog Islands. None was mapped on High Island. Although much of High Island is "swampy", the cover was not purely coniferous.

The miscellaneous cover types include old fields, ponds, marshes, and coastal beach; also small areas of oak, pine and cherry on High Island.

*r. S. me*  
There are about 20 separate clearings totaling only 95 acres on Garden Island. None of these represent attempts to make at least a partial living by farming. All are now abandoned. Approximately 180 acres was cleared on High Island, but this is the result of work by the House of David penal colony which occupied High Island for a time prior to 1930.

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3/18/46