

mooring, anchors are buried at suitable distances from each other on the reef on the western side of the harbour, and ships moor by letting go their own anchors as holdfasts in the centre of the anchorage ground, and then secure their sterns by chains to the anchors on the reef. One chain is sufficient in the summer time, but it is advisable to have two in the winter, when southerly winds occasionally blow.

The channel into the harbour is buoyed on each side, and there are two lighthouses which serve as leading marks either by night or day. One of these lighthouses is erected on a point of the reef on the western side of the harbour, and the other, which is very difficult to distinguish, at the corner of a row of houses facing the harbour. These marks, together with the buoys, are sufficient to enable vessels whose draught does not exceed 15 or 16 feet to enter without a pilot, but vessels of larger draught should take pilots, especially if unacquainted with the port, for as the channel is narrow and the buoys are not moored taut, it does not do to keep midway between them, for they may be out in the channel on one side and over on the reefs on the other side. Of course buoys would not be required at all if the water were clear, but as it is frequently turbid the channel cannot be distinctly seen from aloft.

The harbour is said by the local authorities to be silting up slightly. A survey by the Americans, undertaken shortly before the visit of the Expedition, shows a depth of 22 feet on the bar. There appears, however, to be some doubt as to the datum mark to which the soundings have been reduced, for although the rise and fall is very slight, it appears that there is a difference of a foot or so in the mean level of the sea at different seasons of the year; so that a reduction of a sounding obtained to low water does not allow of a comparison between surveys of different dates. The Government of the Sandwich Islands had at the time of the visit established a surveying and land office at Honolulu and commenced a trigonometrical survey of the group, and doubtless they will establish permanent marks to which soundings are in future to be referred.

The harbour of Honolulu is almost deserted in the summer time, but in the winter is much frequented by whaling vessels. At the time of the visit there was regular communication between the Sandwich and Society Islands, the vessels carrying cattle and sheep to the Society group, and bringing back oranges. A quarantine hospital has been established at Honolulu on some reclaimed ground on the western side of the harbour.

Besides Honolulu there are two other harbours on the island of Oahu; one, the Pearl Lochs, 5 miles to the westward, a large inlet with ample water in it for heavy ships, but which is unfortunately barred by shoals having about 12 feet over them; the other, a small harbour on the northeast side of the island, used occasionally by the local schooners, which appears shallow and intricate.

In the Government buildings at Honolulu there is a public library, which is accessible to all visitors from 10 A.M. to 4 P.M., and as it contains numbers of the original editions of the works of the old voyagers in the Pacific, it is well worth a visit.