As in 1979 archaeological research in southern Labrador this year concentrated upon a Spanish Basque whaling station dating from the 16th century. Although traces of Basque occupation have been found at a number of locations between Schooner Cove and Cape Charles, the scene of the most intensive activity seems to have been in the present village of Red Bay and on islands in Red Bay Harbour.

The project is both multidisciplinary and includes the participation of a number of agencies. The work was conducted under permit from Historic Resources Division, Department of Culture, who also provided logistical support at Red Bay. Memorial University, funded by the Social Sciences and Humanities Research Council of Canada, is responsible for archaeology on the land. Parks Canada is conducting underwater research on the galleon San Juan, lost in the winter of 1565 less than 50 metres from the shore stations. The Public Archives of Canada, and particularly Selma Barkham, has conducted documentary research in Spain. The Canadian Conservation Institute, the National Museum of Natural Sciences, Department of Geology at Memorial University, the Canadian Forestry Service, the Department of Fisheries and Oceans and a number of other individuals and institutions have also been involved in the project.

The 1980 investigations were again centered on Saddle Island which protects Red Bay Harbour from southerly winds and makes Red Bay Harbour one of the safest on the southern Labrador coast. Excavations on Saddle Island were centered at six areas. They are:
Area A

This area was the location of a presumed dwelling almost completely excavated during the 1978 and 1979 field seasons. Evidence suggests that structure was walled with a combination of wood and stone and roofed with red tiles typical of 16th century Spain. One wall may have utilized a nearly vertical outcrop of living rock. Two hearths were found within the structure and were completely excavated during the 1980 field season. Bits of carbonized bone, potsherds, nails, and lead fragments (sprue), add to the impressive collection of ceramics (redware and majolica) glass, nails, knives, and other objects including a plane iron, coin, rosary, etc. recovered in 1978 and 1979. Additional excavations on outlying areas in 1980 produced the socket of a harpoon or lance, several nails, other unidentified iron objects, and several large strips of baleen which may somehow have figured in the construction of the structure.

While the area was clearly a dwelling it is difficult to say precisely who might have lived there. Our original impression that persons of status had once dwelt there still seems a reasonable guess but in the light of evidence from Area E (see below) it seems possible that the occupants of Area A could have been coopers engaged in the assembling of barrels to contain oil from the large unexcavated oven immediately below Area A.

Area B

Excavations at Area B were begun with a test trench in 1978 and expanded in 1979. Considerable waterlogged organic material was recovered in 1979 although work in the saturated deposits was suspended to uncover the remains
of a poorly preserved oven unexpectedly encountered after several weeks' work. In 1980 work in waterlogged (and frozen) areas was resumed and resulted in the recovery of a wealth of wood in an excellent state of preservation. Included among this material are thousands of chips resulting from the squaring or flattening of local spruce, undoubtedly for use in the construction of buildings on Saddle Island. Of even greater interest, however, are a large number of oak and beech barrel parts and refuse from barrel manufacture which suggest the presence of a cooperage very near the wet area where the wood was found. Staves and stave fragments, cants, middle pieces, and center pieces, (including some complete barrel heads), hoops, hoop bindings, bungs and pegs, and numerous pieces of oak and beech scrap (many of which had head pieces sawn from them) all supported the conclusion that a cooperage was nearby. Also of interest were several presumed shallop frame fragments, and other pieces of shaped local and exotic wood.

Area E

This area is located on a small level bench above Area B in a location very similar to that of Area A. A series of trenches was excavated at this location with the position of each tile fragment and other artifact being mapped or recorded. Preliminary indications are of a wood and stone structure, probably not unlike that in Area A. Artifacts also indicate a pattern similar to the glass, ceramics, food refuse, and other objects found at Area A although considerably fewer in absolute numbers. Of special interest, however, was a cooper's adze in an excellent state of preservation, two "head vises" (tools for lifting the last head piece of a barrel into position), a possible hoop driver or a fragment of a
device for forcing the hoops over the top of a barrel, and a large number of chips and fragments of oak and beech, the woods from which all barrels were constructed. The inescapable conclusion is that Area E represents the location of a cooperage where coopers both worked and lived. Its general similarity to the structure and artifact assemblage from Area A further suggests that this previously explored structure may have served a similar purpose.

B and E test trench

To determine the relationship between Areas B (where cooperage refuse was recovered) and E (the presumed location of the cooperage) a one metre wide test trench connecting the two areas was excavated in 1980. The upper part of the trench was immediately below a steep rock face which rises abruptly to the elevation of Area E. Considerable refuse was found in this portion of the trench including not only oak, beech, and hoop fragments, but ceramics, glass, nails, lead, two fishhooks, and a variety of other materials. The lower portion of the trench produced more wood fragments and indicates a continuous distribution of cooperage refuse from the structure to the waterlogged area below. Other artifacts were not as numerous in this portion of the trench although a few bits of ceramic, glass, other objects, and one silver coin (now almost completely altered to silver chloride and as yet unidentified) were recovered.

Area C

This area was the scene of a major effort in 1979 which continued during the 1980 field season. It is the location of a large oven where
blubber was rendered into oil for shipment to Europe. Area C is one of at least seven such ovens on Saddle Island and may be said to be the heart of the whale processing operation. It consists of a long (greater than 10 metres) wall of local and imported (ballast) rocks set in a mortar of grey clay brought from Spain. The wall is more than a metre high in places and averages greater than 60 cm. in thickness. The seaward side of the wall that the cauldrons in which the blubber was rendered were supported. We suspect that short walls at right angles to the main wall were used to support the cauldrons but thus far none has been found, owing, at least in part, to disturbance of this area by heavy seas which tumbled the rocks and deposited beach sand, gravel, and roof tile fragments throughout the disarranged rocks. Further work, however, may clarify this situation.

Excavations on the "inside" of the wall, however, were much more successful. Beneath a thick (up to 50 cm.) layer of crushed roof tile fragments were found the carbonized timbers which supported the roof. Below these, which were not in a particularly good state of preservation, was found a reasonably well preserved series of planks which formed a floor or working platform which at one time may have rested at the level of the wall. Most of these are of local timber but at least two of those exposed to date are of oak and have holes where dowels or treenails were once inserted. We suspect that they are ship planks salvaged for use in construction of the oven. Atop this floor or working platform there were found the remains (staves, head pieces, hoops) of tubs made by sawing whale oil barrels (barricas) in half transversely. They were undoubtedly placed there when the ovens were in use and from descriptions of the Spitsbergen whale
fishery in the early 17th century we are able to reconstruct their function. After the oil was rendered from the blubber it was ladled into tubs half filled with water to cool the oil and to allow the "dross" to settle, thereby purifying the oil, at least to a certain extent. The oil was then ladled into barrels and the bungs driven home, often with a cloth gasket. A considerable amount of textile was also found atop this working platform. It may have been used as gasket material. Comparison with fabric from bungs recovered from the San Juan will take place shortly and should confirm or refute this suggestion.

Other artifacts from Area C are relatively rare and, in addition to nails from the structure itself, include only a few potsherds, some copper fragments which may be bits of cauldrons, and a few leather fragments including one object which appears to be a shoe or pouch. Excavations at Area C are expected to be completed in 1981 and attention will be turned to adjacent structures and areas which may reveal more of the whale processing operation.

Area F

This area was discovered in August 1980. It is located some distance southeast of the previous excavations and is well removed from the harbour in a location quite unlike those areas previously excavated. The thin overburden of crowberries and other vegetation cover was removed to reveal a roughly rectangular roof fall and post moulds and a "drip line" indicating a rectangular building with substantial wooden supports and a tile roof. Time did not permit the removal of the roof fall but a number of artifacts were recovered in
the process of exposing the tile layer. A number of these indicate a 19th or 20th century component but most artifacts, including two harpoon(?) sockets, ceramics, glass, nails and a lead(?) medallion date from the Basque occupation. As yet we have not been able to suggest a function for this structure but may be able to do so when excavations are completed in 1981.

In all, the 1980 excavations at Saddle Island were extremely successful. They resulted in the recovery of approximately 3,500 artifacts but more importantly revealed at least one new activity area (the cooperage and, perhaps, Area F), and added to our understanding of the whale processing as carried out at Area C. It is expected that excavations in future years will continue to add to our understanding of the Basque presence in eastern Canada prior to the year 1600.

Other excavations and surveys

In addition to excavations at Saddle Island surveys and test excavations were conducted in and around Red Bay Harbour and along the coast from Carrol Cove to Chateau Bay. The results of these surveys are recounted briefly below:

**Carrol Cove**

Roof tile fragments were found along an area roughly 100 metres in length on the south side of Carrol Cove Harbour. No structures are visible on the surface and considerable recent disturbance suggests that excavations may not be repaid. However, the discovery of evidence of Basque occupation increases our knowledge of whaling
station locations and confirms Selma Barkham's hypothesis that Carrol Cove was indeed the location of a shore station.

Western Arm - Red Bay

Several sites were discovered in Western Arm. They include:

A group of sod structures which produced seal bones, ceramics, iron, a gun flint and other material which may date to the late 18th or early 19th century. No identification of the site is yet possible but it might be the location of a French sealing station dating from the 18th century.

A Rattler's Bight period Maritime Archaic site was located in a blowout at the western end of the arm. No material remained in situ and what artifacts were recovered were scattered throughout the basin. The presence of a very high proportion of artifacts (celts, gouges, bifaces, a plummet, a Ramah chert projectile point, etc.) and very few flakes suggests that the site may have been a small burial locus rather than a living site.

Several small concentrations of quartz and quartzite flakes and occasional artifacts suggest the presence of aboriginal people in the Red Bay area during the early/middle Archaic period, probably 6-7,000 years B.P.

Finally, a small concentration of very high quality chert flakes and spalls and a roughly side-notched biface provides something of a puzzle in interpretation. The raw materials are quite unlike the usual quartz, quartzites, and low grade cherts used by other peoples in the Strait of Belle Isle region. The source of the raw materials remains unidentified and the cultural affiliations of the site await the
recovery of additional artifacts and perhaps datable charcoal.

**Tracey Beach - Red Bay**

Excavations were carried out at Tracey Beach on the west shore of Red Bay Harbour to expose a whale bone deposit. S. Cumbaa, National Museum of Natural Sciences, assisted in the excavations and will analyze the date obtained. The area excavated produced primarily ribs and vertebrae and fragments thereof. At least 32 individual whale skulls were counted elsewhere on the beach. All save one possible bowhead were the skulls of right whales.

**Twin Island**

Test excavations on this small island east of Saddle Island revealed the rock outline of a small rectangular structure built against a vertical rock face. Against this face is a mound of grey clay identical to that used by Basques in the construction of ovens. A grid has been extended to Twin Island and excavation of this structure will be undertaken when time permits and, hopefully, when the resident goat has been removed to some location where it will be less bothersome.

**Chateau Bay**

Several areas at Chateau Bay produced concentrations of quartz, quartzite, and, in one instance, Ramah chert. Only one identifiable artifact, a projectile point similar to those from the Arrowhead Mine site (c. 7000 B.P.) was recovered.