

INTERIM PROGRESS REPORT
HISTORICAL RESOURCES SITE SURVEY AND ASSESSMENT
PACIFIC RIM NATIONAL PARK

by

James C. Haggarty and Richard I. Inglis

Archaeology Division

British Columbia Provincial Museum

Victoria, B.C. V8V 1X4

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1.0 INTRODUCTION

In the original research proposal outlining general objectives for the Historic Resources Site Survey and Assessment Project, Pacific Rim National Park, a research strategy composed of four stages was proposed:

- a) archival and oral history research;
- b) field research and documentation;
- c) integration of archival and field research; and
- d) synthesis and interpretation

To accomplish the general objectives of the project, a four phase research framework was developed: Phase I encompassed completion of the archival and oral history research programmes as well as the development of a field research design; Phase II, completion of the Broken Group Islands field research programme; Phase III, completion of the Long Beach and West Coast Trail field research programmes; and Phase IV, completion of the integration of archival and field research programmes, including synthesis and interpretation of data generated in Phases I through III. Research activity has progressed well with Phases I, II and III now complete and Phase IV is well underway.

The purpose of this Interim Progress Report is to report in detail on the field research design developed for the project, the methodology employed and the results obtained in field research programmes for each of the three units of Pacific Rim National Park.

2.0 THE FIELD PROGRAMME

The area encompassed by the three units of Pacific Rim National Park (Fig. 1) falls within a portion of the traditional territories of six Nuu-chah-nulth groups: the Clayoquot and Ucluelet for the Long Beach unit; the Sheshaht for the Broken Group Islands unit; and the Ohiaht, Nitinaht and Pacheenaht for the West Coast Trail unit (Fig. 2). Close liaison with the Nuu-chah-nulth Tribal Council and their Cultural Committee was initiated at the start of the project and with each of the six groups prior to commencement of each of the field work programmes. Excellent rapport and cooperation with all parties was established and maintained throughout the project.

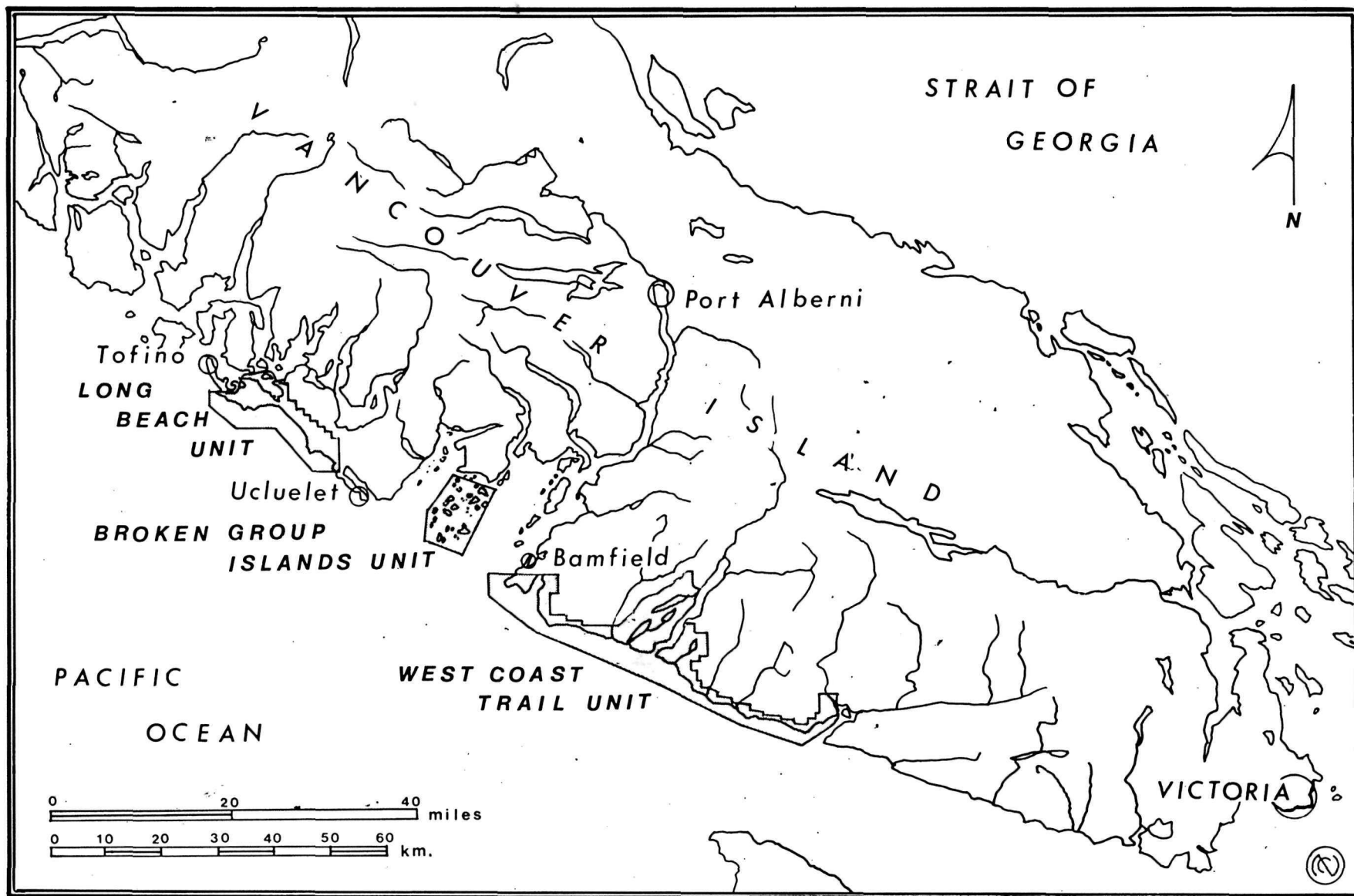


Fig. 1. Boundaries of the Long Beach, Broken Group Islands and West Coast Trail units of Pacific Rim National Park, west coast of Vancouver Island.

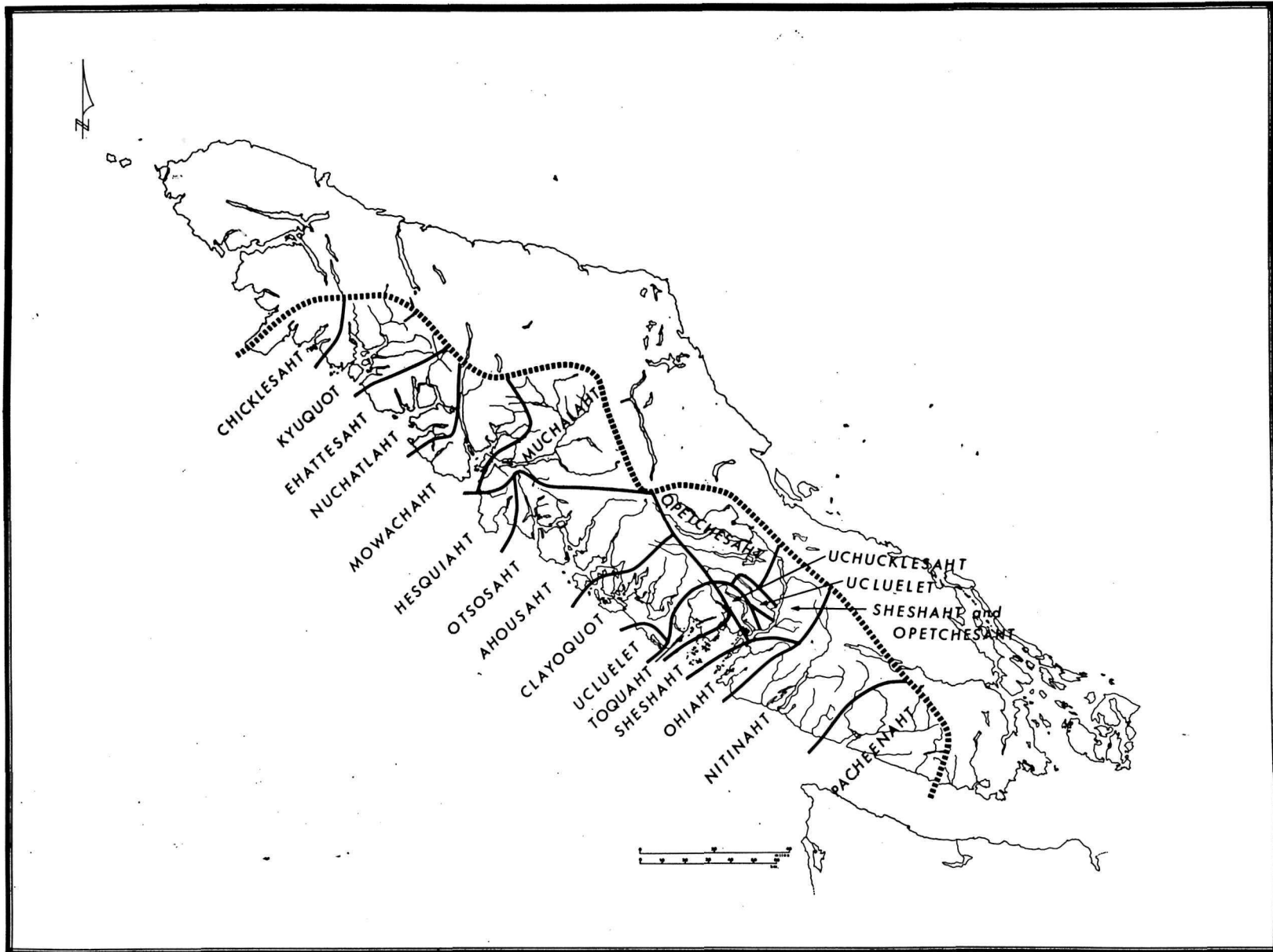


Fig. 2. Late nineteenth century ethnographic boundaries for Nuu-chah-nulth groups on the west coast of Vancouver Island.

3.0 RESEARCH DESIGN

The three units of Pacific Rim National Park encompass the three major environmental zones identified by Haggarty and Inglis (1983) for the west coast of Vancouver Island (Fig. 3). These three zones, exposed, semi-exposed and protected, are based primarily on "a combination of generalized physiographic and biophysical parameters including exposure to surf, configuration of the coastline, and variation in salinity and temperature regimes" (Haggarty and Inglis 1983:11).

The exposed or outer coast zone is characterized by a generally linear coastline, completely exposed to the full force of the surf. This shoreline consists of rocky headlands, rock platform beaches, occasional long crescentic sand beaches and few small pocket sand or gravel beaches. Located offshore are reefs, rocks and a few islets. On the leeward side of rocky islets and narrow channels are located the only areas suitable for shelter and access. In this zone, salinity is obviously high and water temperature constant, resulting in a rich and varied marine resource base. Many sea mammals, flatfish, rockfish and pelagic birds are available year round while others are plentiful only on a seasonal basis. Intertidal resources available, however, are somewhat restricted, represented largely by Mytilus californianus.

The semi-exposed or transitional zone is protected from direct wave shock but is, nonetheless, still subject to some surf action. The shoreline is again varied but mixed sediment beaches are common. As salinity remains high and temperature fluctuations slight, marine resources are again abundant and varied. They differ from the exposed zone, however, both in type and quantity of species represented. The intertidal zone with more numerous and protected beaches yields large quantities of clam species, (as well as Mytilus californianus and Mytilus edulis). Sea mammals, rockfish and pelagic birds are again available

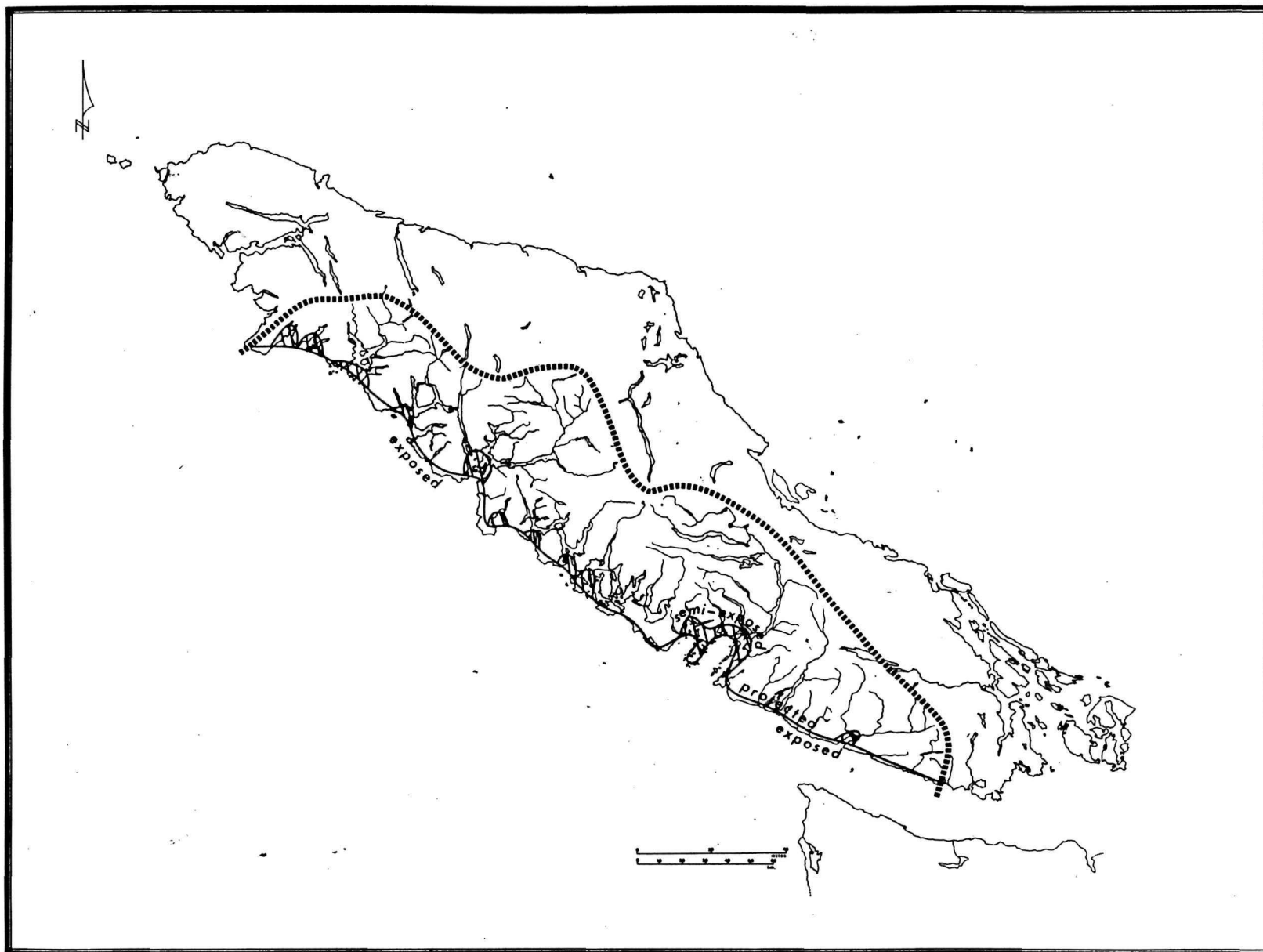


Fig. 3. Exposed, semi-exposed and protected macro-environmental zones on the west coast of Vancouver Island.

generally on a year round basis. Certain fish species, herring in particular, are seasonally abundant. The island archipelagos at the mouths of the sounds are characteristic of this category.

The protected or inner coast zone lacks direct ocean surf, being sheltered by island archipelagos and generally large land masses. The numerous inlets are typical of this category. Inlet shorelines are generally linear, dropping off sharply at the waters' edge. Sand or gravel beach development is usually restricted to the mouths of rivers and streams. Major rivers at the heads of the inlets and occasional streams along the margins provide the only break along the steep rocky shores. Marine resources are severely limited by low salinity, considerable temperature variation and general lack of fresh and salt water mixing. (Mytilus edulis is the predominant shellfish resource.) Several seasonal resources, however, are available in abundance in the riverine environments. These include the five species of salmon, migratory birds and selected terrestrial mammals. (Haggarty and Inglis 1983:12).

At the macroenvironmental level, the setting of the Broken Group Islands unit consists of exposed and semi-exposed zones while both the Long Beach and West Coast Trail units consist of exposed and protected zones. Each park unit, however, presented its own unique set of challenges with regard to the development and implementation of field research designs and strategies.

3.1 The Broken Group Islands Unit

The approximately 100 islands, islets and reefs that comprise the Broken Group Islands were divided arbitrarily into six field survey areas (Fig. 4). These six areas are: A) the Turret/Clark/Benson complex; B) Effingham/Wouwer/Howell complex; C) Turtle/Dodd/Willis complex; D) Jaques/Jarvis/Gibraltar complex; E) Hand/Brabant complex; and F) Nettle/Prideaux/Reeks complex. These areas, separated as they are by

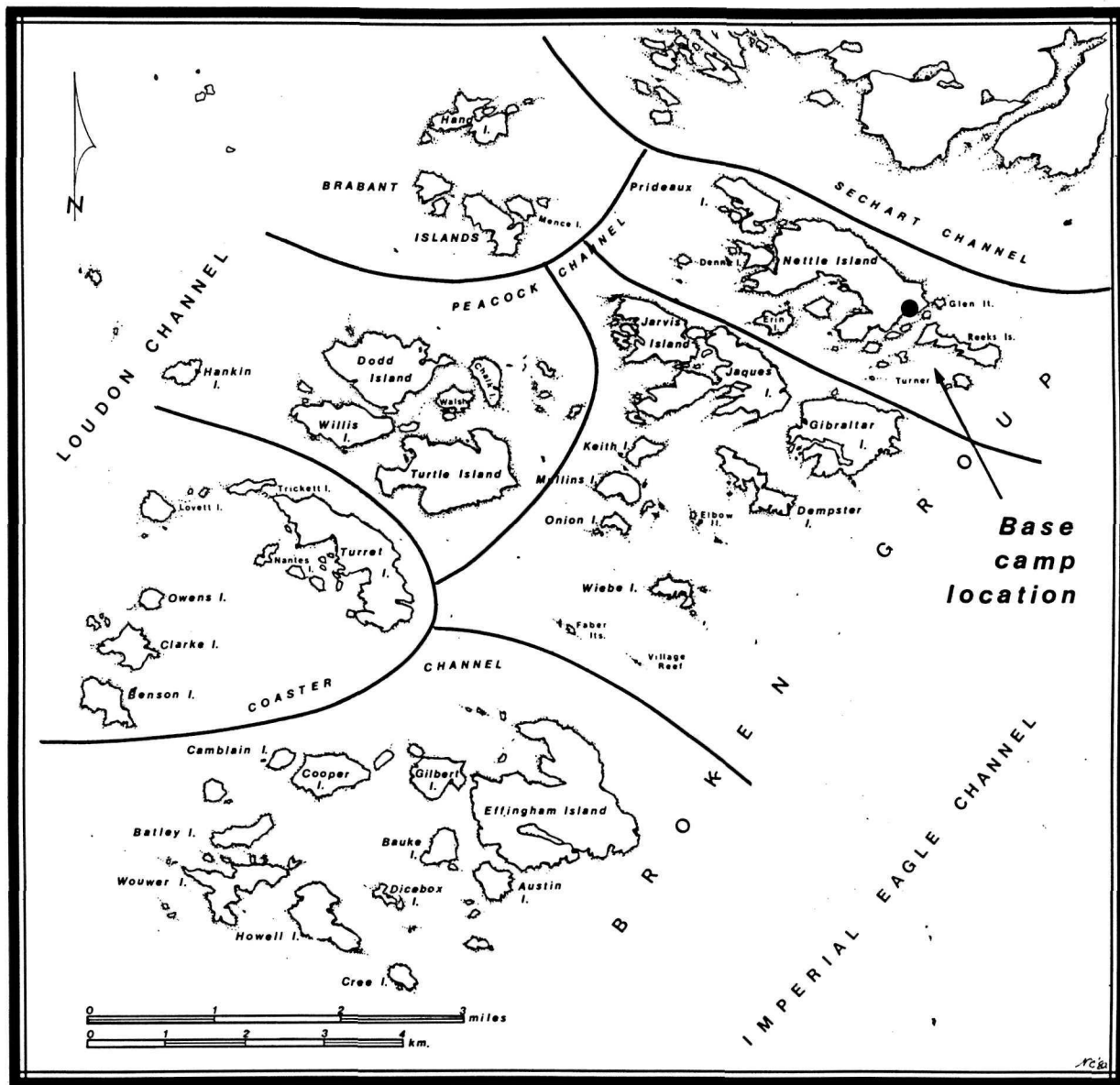


Fig. 4. Field survey areas, Broken Group Islands unit:
a) Turret complex, b) Effingham complex, c) Turtle complex,
d) Jaques complex, e) Hand complex and f) Nettle complex.

major channels or water passages, were viewed as discrete survey entities to be worked sequentially. To gain understanding of and insight into the location and distribution of archaeological sites in general and specific types of sites in particular, the following survey sequence was adopted: Turret complex, Nettle complex, Jaques complex, Effingham complex, Turtle complex, and finally Hand complex. This sequence was designed and adopted to provide detailed survey data from island complexes located in both exposed and semi-exposed environmental zones as early as possible in the field programme. Early knowledge of site distribution and density from both environmental zones was crucial for making subsequent field survey judgements, not only for the remaining areas of the Broken Group Islands but also for the Long Beach and West Coast Trail units.

Prior to initiation of the field programme, a three day field reconnaissance trip was undertaken to evaluate important field logistical concerns in the Broken Group Islands unit. Of primary importance were questions regarding the efficiency of a single base camp as opposed to two or more base camps in terms of travel time to specific survey units, the logistics associated with supplying one or more base camps with fuel, water and food and potential base camp locations. It became apparent as a result of this trip that a single base camp would prove more efficient than shifting base camps during the field programme. The offer by the Sheshaht Band Council of use of the Band cabin and adjacent reserve land on Nettle Island (Fig. 4) for our base camp was accepted with gratitude. This location was our first choice and proved to be ideal in that its protected location enabled us to operate even in inclement weather. From

this location travel by inflatable boat to various points within the Broken Group Islands was assured. Supplies of fuel, water and food along with crew changes were facilitated through the port of Bamfield, located approximately 13 km southeast of the Nettle Island base camp.

3.2 The Long Beach Unit

The field research design for the Long Beach unit involved a research strategy that divided the unit into two survey areas corresponding to the two major macroenvironmental zones present in the park unit: exposed and protected (Fig. 3). The two field survey areas were A) the Long Beach area and B) the Grice Bay/Indian Island area (Fig. 5). Survey priority was given to the exposed, outer coast Long Beach area. Although much of this exposed shoreline is accessible at numerous locations by vehicle, certain sections, particularly the Cox Point headlands, are more efficiently surveyed by inflatable boat than on foot. By giving this area priority over the Grice Bay/Indian Island area we were able to be selective in terms of weather conditions when working this exposed section by boat. Those sections of the unit easily accessible by vehicle and thus by foot could be surveyed irrespective of changing weather patterns. Survey of the protected Grice Bay/Indian Island area, although dependent on water transport, was not dependent on weather conditions. As both areas were easily accessible by vehicle, it was possible again to operate out of a single base camp, a Parks Canada house located in Ucluelet.

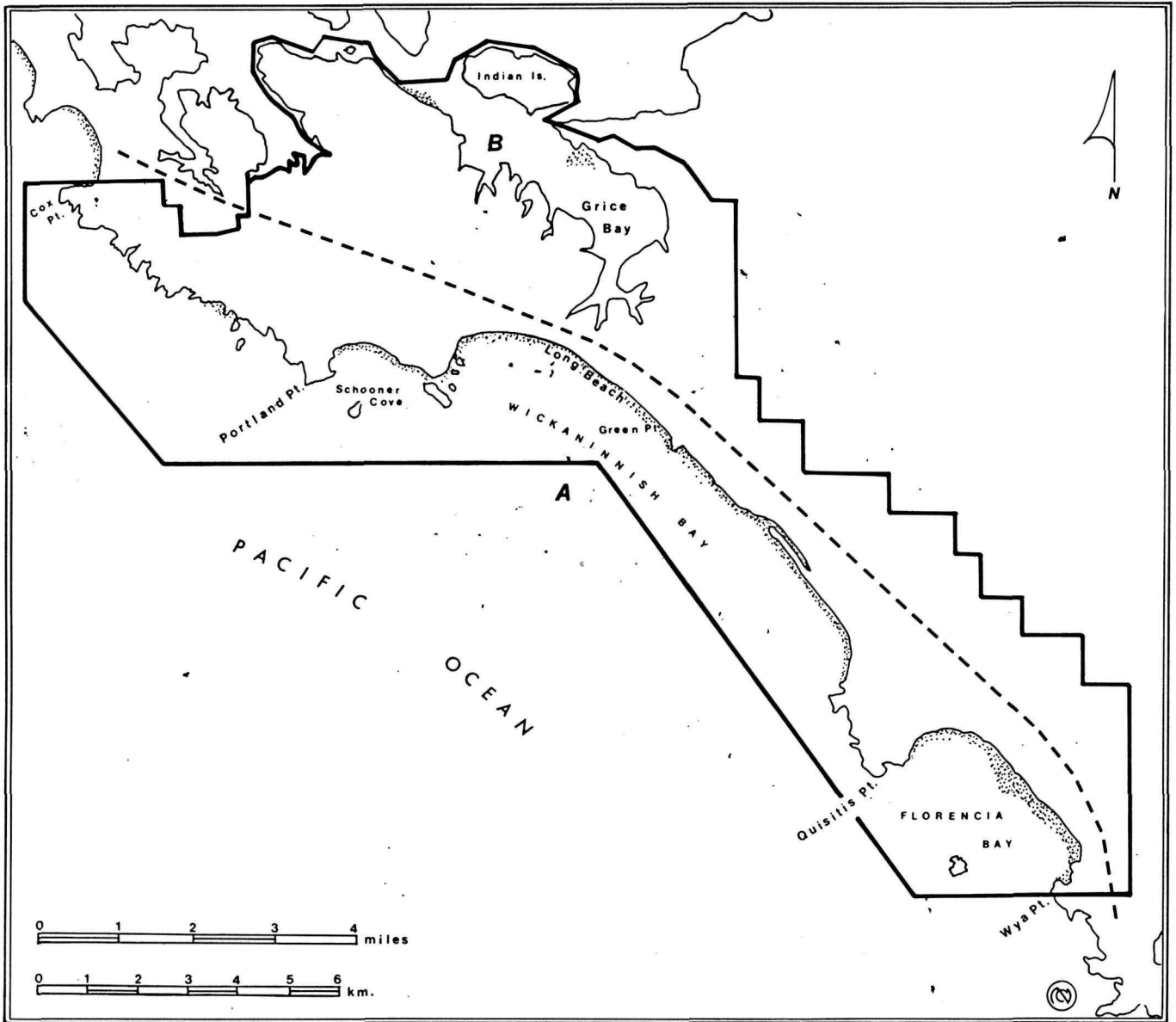


Fig. 5. Field survey areas, Long Beach unit: a) Long Beach area and b) Grice Bay/Indian Island area.

3.3 The West Coast Trail Unit

Like the Long Beach unit, the West Coast Trail unit was also divided into two field survey areas: A) the Trail area, including the Cape Beale headlands, and B) the Nitinat Triangle area including Nitinat, Hobiton and Tsusiat Lakes and the Cheewhat Lake and River (Fig. 6a and b). Again, these two survey areas correspond to the exposed and protected macroenvironmental zones present along this section of coastline (Fig. 3). Survey priority within this unit was given again to the exposed, outer coast Trail area. Although both survey areas in this park unit are similar in many respects to the two identified for the Long Beach unit, they differ substantially in terms of relative ease of access. The combination of a long, linear, exposed outer coast shoreline and lack of vehicle access, except for the Pachena Bay locale, posed a number of logistical problems. For the Trail survey area, it was necessary to subdivide the area into five sub-areas, each with a temporary base camp. The five sub-areas and their base camp locations were: 1) the Cape Beale headlands with a primary base at Bamfield and a secondary base at Keeha Bay; 2) Pachena Bay to Klanawa River with a base camp at Pachena Lightstation; 3) Klanawa River to Dare Point with a base camp at the Cheewhat River; 4) Dare Point to Walbran Creek with a base camp at Carmanah Lightstation; and 5) Walbran Creek to Port Renfrew with a base camp at Port Renfrew (Fig. 6a and b). In addition to these five base camps, the 'Nesika', a 50 foot research vessel belonging to the Archaeology Division, British Columbia Provincial Museum, was used extensively to transport field crew and supplies along this section of coastline and as a mobile sixth base camp.

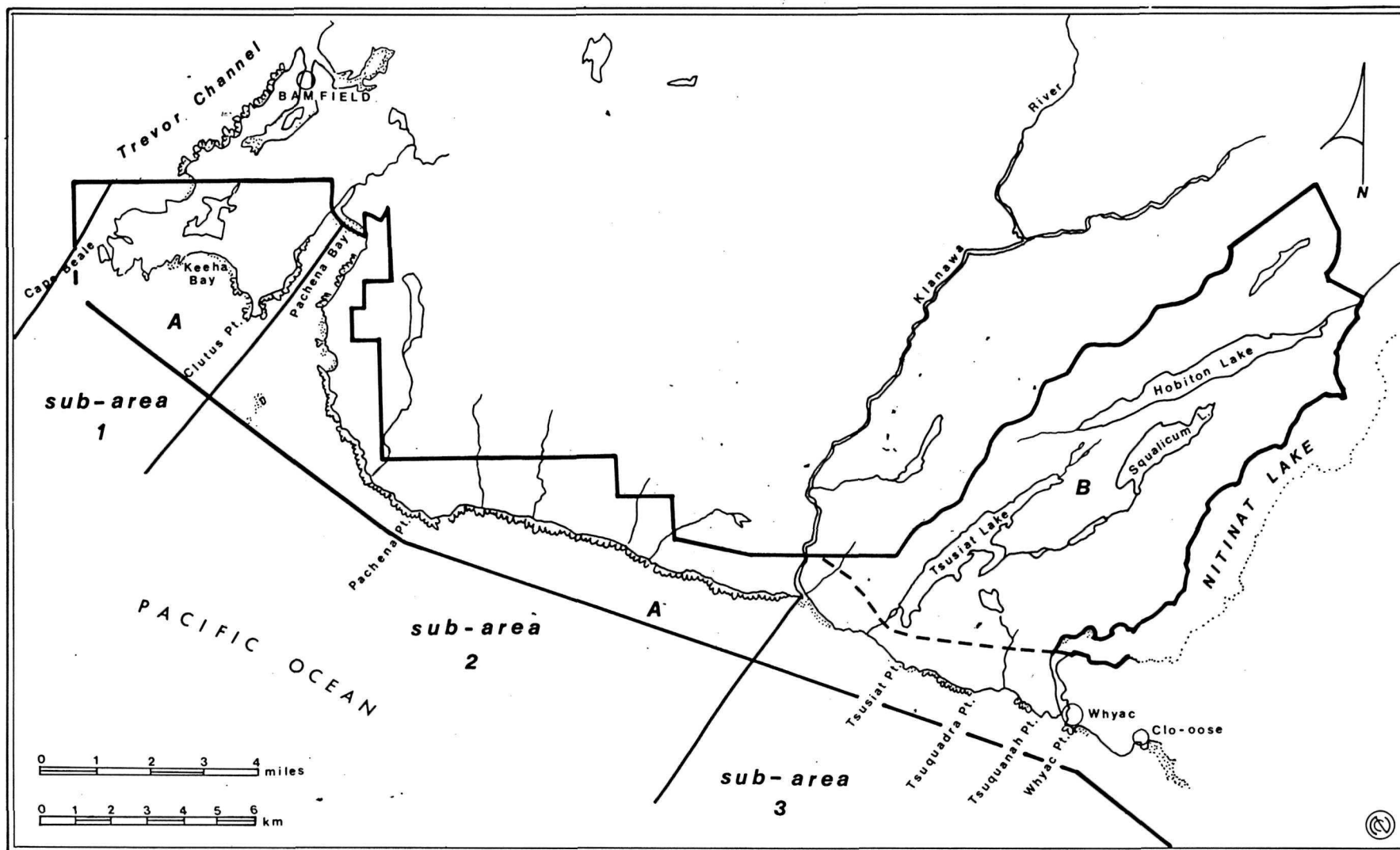


Fig. 6a. Field survey areas and sub-areas, West Coast Trail unit (western section):
 a) the Trail area including Cape Beale headlands and b) Nitinât Triangle area.

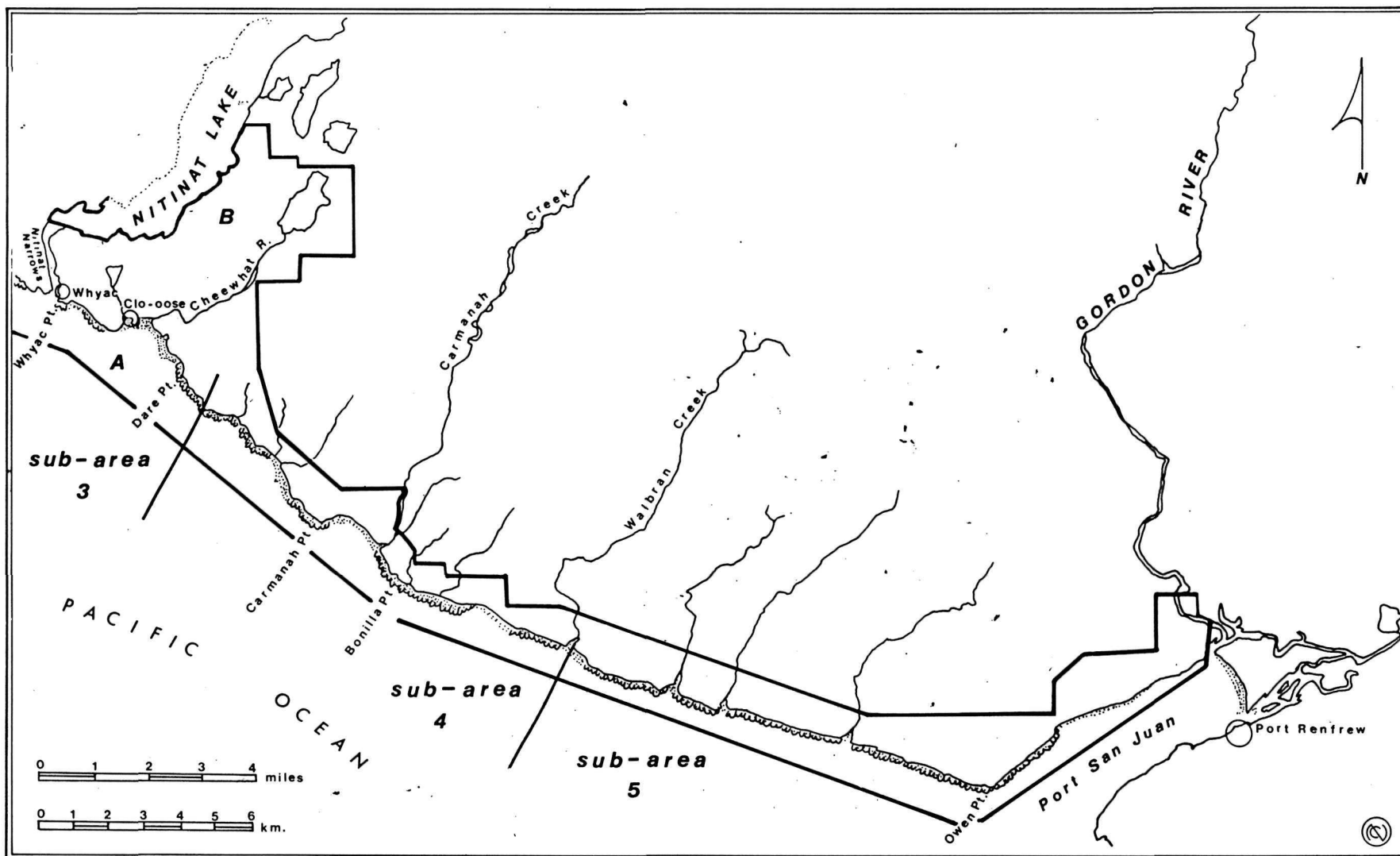


Fig. 6b. Field survey areas and sub-areas, West Coast Trail unit (eastern section): a) the Trail area and b) the Cheewhat Lake and River area.

Survey work within the Nitinat Triangle area also presented unique logistical problems. The Nitinat Lake shoreline encompassed by current provisional park boundaries was surveyed systematically by boat from a base camp located near Nitinat Narrows. Shoreline survey of Tsusiat and Hobiton Lakes within the Nitinat Triangle was done by inflatable boat airlifted into the lake system. Temporary base camps were established at both ends of Hobiton Lake.

4.0 METHODOLOGY

The field methodology employed was consistent for all three units of Pacific Rim National Park. Although the specific survey methodology employed on this project was developed on earlier projects on the west coast of Vancouver Island (Haggarty and Inglis 1981, 1983) and elsewhere on the Northwest Coast, it was modified slightly and refined during the early stages of the field programme in the Broken Group Islands unit, standardized for the project as a whole and applied consistently throughout the remainder of the field programme. The methodology employed can be divided into two essential components:

1) site survey and 2) site mapping and recording.

4.1 Site Survey

Physical evidence of past use of a landscape takes the form of observable modification or alteration of natural surfaces or a sequence of surfaces. Knowledge and understanding of the physical and biological environment and the processes responsible for their current configuration or expression is a crucial component in the location and study of archaeological resources. Equally important in a study of this kind is a thorough knowledge and understanding of the specific cultural systems, particularly socio-economic patterns, employed by the human groups or social units that are ultimately responsible for altering in some way the natural landscape within their territorial jurisdiction. Knowledge and understanding of both natural and cultural systems will generate

comprehensive inventories of archaeological sites within defined geographical limits.

An archaeological surveyor must operate on the landscape with a full range of expected and potential site types in mind. Armed with this knowledge, the surveyor must then begin the process of "reading" the natural landscape and articulating the expected with actual site observation. It is important to be open-minded and thus receptive to the unexpected for all environments have much to teach. As apparent patterns begin to emerge, it becomes necessary to resist the comfortable temptation of thinking you have figured out past land-use relationships if you hope to avoid the trap of early pattern confirmation. Throughout the field work phase, it is crucial that site surveyors acquire new knowledge and apply it immediately. If the procedure is working well, it will be necessary to return, perhaps several times, to areas previously surveyed simply to test new knowledge or new understanding. Due to the dynamics of the process, the rewards are often great.

The actual field methodology of site survey on the west coast of Vancouver Island and elsewhere on the Northwest Coast usually involves a combination of land, water and air transport. All three forms of transportation were used during the project: vehicles for travel to and from towns closest to the three study areas and, in the Long Beach unit, to and from the base camp at Ucluelet to points within the study area; watercraft for travel from towns to base camp locations for the Broken Group Islands and West Coast Trail units and to and from numerous locations within all three study areas; and air transport, primarily for aerial reconnaissance and photography within all three study units but

also for transport to and from specific locations within the West Coast Trail unit. Within each study area, the actual on-ground site survey was conducted on foot.

The methodology employed in all three units of Pacific Rim National Park was applied consistently and rigorously from one survey area to the next. These procedures involved precise delineation of survey area boundaries prior to commencement of actual field survey. In the Broken Group Islands, for example, specific geographic divisions such as a portion of the shoreline of a larger island or the shorelines of a number of small islands were assigned on a daily basis. Each field crew worked independently on assigned geographic divisions until the larger survey area was completed. At this point the entire field crew would shift into a site mapping and recording mode for the survey area just completed.

The actual survey procedures employed by a field survey crew were numerous and varied but were applied within the context of a single overriding principle: the key to understanding past use of a particular landscape is to characterize and understand the intertidal or littoral zone of that landscape. As this zone can only be viewed with certainty at a half tide or lower, all shoreline survey was conducted in accordance with tidal fluctuations. Time periods of work were adjusted accordingly. No new shoreline was surveyed when tide levels exceeded the half-tide mark. Instead, survey crews would return to those portions of their assigned geographic divisions previously categorized and concentrate further survey activity on the high intertidal and forest edge zones. On the following day, survey activity of the low intertidal

zone would commence where the crew had left off the previous day. This set of procedures was employed daily until completion of the survey area.

In order to adhere consistently to the survey principle, the entire intertidal area of specific geographic divisions was observed on foot. Those areas that were virtually impassable on foot were surveyed by boat but with frequent stops in order to investigate the forest edge and near shore areas. As intertidal and shoreline configurations change, so should the range of expected site types. For example, a shoreline consisting of a steep intertidal zone greatly reduced the probability of locating open habitation or fish trap sites but greatly increased the probability of finding rock art or cave/rock shelter locations suitable for burial and/or habitation. It is this type of area that field survey crews would return to when tide levels forced termination of unsurveyed sections of shoreline. Strict adherence to this basic site survey principle has been responsible for the dramatic increase in the overall number of sites located within each of the three park units and in the range of site types observed.

As each field survey area presented different challenges, maximum flexibility was given to individual crews to decide on the most efficient way to survey their assigned areas. With a crew size of two to four people, it often was possible on selected segments of shoreline to employ a "leapfrog" procedure. Half the survey crew would be dropped at a particular point along the shoreline to begin walking in a specified direction while the remaining half of the crew would travel a convenient distance along that shoreline, leave the inflatable boat secured at that

point and proceed to walk in the same direction as the first crew. When the first crew encountered the boat, they would shift it again, this time to a point located a convenient distance in front of the second crew. Obviously, this procedure can only be used on certain stretches of shoreline but when it is used effectively, it is extremely efficient as no time is lost back-tracking to retrieve the boat. Along other types of shoreline, particularly stretches with a steep intertidal zone, it was more efficient to have one person operating the inflatable full time and dropping off and picking up crew members in sequence, shifting them from point to point along the shoreline. These along with other procedures or a combination of procedures were used during the course of the site survey. The actual procedure employed was dictated, of course, by the particular shoreline configuration intended for survey.

Each of the field survey crews had one person responsible for recording and note taking. Records were kept in daily journals not only on archaeological site observations, including site type, rough dimensions, features, location, etc. made during the course of survey but also on important details regarding shoreline configuration and resource distribution within the survey area. These daily logs were reviewed by the project directors and discussions involving the entire field crew were a common occurrence. This practice allowed for the increasing knowledge and information about the study area as a whole to be shared and used by all field crews. As knowledge and expertise increased, some areas were resurveyed to ensure consistency between field survey areas.

All site locations with the exception of those sites previously known and for which partial site records existed were given temporary site

designation numbers in accordance with the established site designation scheme for Canada (Borden 1952). Archaeological sites were given individual site designations whenever a separate and discrete site function could be inferred from field observation. For example, if a culturally modified tree and a surface burial were observed on the surface of or adjacent to a village or camp habitation site, three separate archaeological site designations would be assigned to the three discrete functions. Similarly, if two or more fish trap locations were separated by rocky headlands or were discontinuous even though they were located close together, each would be given an individual site designation.

The rationale behind this approach concerns social access to and control over the use of a particular location, contemporaneity of use, and the resource intended for capture or collection. In the absence of detailed ethnographic data regarding the use of specific locations by specific social units, it is entirely appropriate at this point in the study to allow for differential use by unknown social units and to treat habitation or resource locations separately than to infer that a single social unit was responsible for all observed modifications to the landscape located in close proximity to one another. The primary underlying assumption of this approach is that individual site locations are fundamental to accurate culture-historical reconstruction, particularly at the local group, tribal and confederacy levels of socio-political organization and perhaps even more importantly at the individual family or household levels as well.

4.2 Site Mapping and Recording

Upon completion of the site survey phase, the entire field crew shifted into a site mapping and recording mode. All previously known sites along with new sites found during the course of the present survey were viewed as a unit and a strategy was devised for their efficient mapping and recording. The development of a mapping and recording strategy was dependent usually on the number of sites within specific site type categories. Large village sites in particular required a large number of crew members to record it efficiently. The mapping and recording of other types of sites usually required only two or three people thus allowing two or more recording crews to work simultaneously. With the recording strategy devised, individual recording crews were assigned specific sites to map and record on a daily basis. Each crew with their own recording kits was a self-contained unit responsible for scheduling the recording sequence of sites within their jurisdiction. Scheduling between sites as well as at particular sites was required if time was to be used efficiently. Fish traps and other sites with components located in the intertidal zone, canoe runs for example, were scheduled for mapping in accordance with tidal fluctuations.

Mapping and recording procedures, like those for site survey, were developed on earlier projects on the west coast of Vancouver Island but perfected and standardized during the early stages of the field programme in the Broken Group Islands unit. They were adapted and applied consistently throughout the remainder of the project.

The actual field procedures involved in mapping and recording individual archaeological sites varied slightly according to the type of site being mapped. Within specific site types, however, the procedures employed were highly standardized and uniformly applied. The first step was to determine the maximum dimensions of the site. This was accomplished by using Oakfield soil samplers for village and camp habitation sites and by direct observations for other site types such as fish traps and burial caves. With this step completed, the mapping procedure was initiated. For habitation sites a base line chain was established, preferably in the high intertidal zone clear of the forest edge vegetation zone, parallel to the long axis of the site. It was important to ensure that this base line was straight, tight, free of obstructions and known to exceed the overall length of the site. When the base line was set, the bearing relative to magnetic or true north was recorded. With the base line established, mapping of both the site and any intertidal features, such as canoe runs, proceeded simply by running a series of right-angle transects in both directions from the base line.

The process of drawing a detailed field map of an archaeological site first involved choosing an appropriate scale to use to record overall site dimensions and associated features. Scale ranged from 1 cm = 1 m to 1 cm = 10 m for larger sites. Once the scale for the site map was selected, the base line was positioned on the graph paper so that the site and all associated features would fit, the bearing of the base line was recorded and appropriate metre intervals marked. A series of

right-angle transects were then run in both directions from the baseline. If tide was a factor, a series of judgemental transects were made to record intertidal features at low water. Attention then was directed toward the landward side and mapping of the site itself.

The process of mapping an archaeological site was under the direction of the individual composing the field map, usually the crew chief. As site boundaries and outlines of associated features were interpolated between points along two adjacent transects, the number and position of transects were judgemental decisions made by the mapper, guided always by the high degree of accuracy required for the ensuing map. Sites that were uniform generally required fewer transects than sites that were irregular in outline.

Along each transect, specific points and their distance from the baseline were mandatory. For example, points such as vegetation edge, beach edge, beginning of deposit, beginning of front slope, top of front slope, beginning of back midden ridge, top of back midden ridge, bottom of back midden ridge and end of deposit, were recorded, if present, along each transect. As mentioned previously, site boundaries and associated features were interpolated between transect lines and as such required the mapper to move back and forth along these lines in order to map in boundaries and features. As a rule, site maps were constructed by beginning at one end of the site and progressing to the other end of the site, keeping track of the internal fluctuations of specific site features.

Upon completion of the basic site map, including all associated cultural features such as house depressions, house platforms, intertidal modifications, etc., recording of other detailed information pertinent to full site description was begun. Detailed notes were made on the present condition of the site and the likelihood of future disturbance, vegetation, the composition and depth of both cultural and non-cultural matrix, nearest water source, the present location of known finds, if any, a record of all photographs taken of the site or of site features, both in colour and black and white, notes regarding site age, plus any other information necessary for understanding site history and possible use. In addition, numerous elevation measurements were taken with a hand-held level using the maximum height of barnacle line as the zero point of reference. These measurements were recorded directly on the site map for all prominent site features.

Sites other than village or camp habitation sites required slight modification of some of the procedures described above. For habitation and burial caves, the site baseline was aligned parallel to the long axis of the cave, beginning outside the dripline and front burm and extending the entire length of the cave. Right-angle transects were then run off both sides of the baseline to provide accurate measurements of the cave floor surface area. All features located on the floor of the cave also were measured in this manner. In addition, profiles of the cave walls and ceiling were measured and drawn at selected intervals along the baseline in order to characterize the above surface volume of the cave.

Depending on the type and complexity of fish trap sites, different variations of the same basic procedure were employed. For simple, single-wall traps, the base line was run from outside the small opening in the middle of the wall to the vegetation edge at or near the centre of the small natural embayment inside the trap. Right angle transects were run off both sides of the baseline to characterize and measure not only the stone wall trap but the entrapment area as well. For the more complex pen or multiple pool traps, the baseline was run so that it divided the trap complex into roughly two equal halves. This format had the distinct advantage of keeping the transects as short as possible. Elevation measurements were taken and recorded at selected points within all fish traps. Most of these measurements, of course, were below the barnacle line.

Culturally modified trees were mapped on camp or village site maps if they occurred on or adjacent to them; if not, their location was measured in and plotted from a reference point located on the nearest stretch of shoreline. Detailed measurements and notes were made not only for individual trees but also for individual scars if two or more were present on a single tree.

Detailed information on all sites was recorded on the British Columbia Archaeological Site Form (Appendix I) according to standards established in the "Guide to the B.C. Archaeological Site Inventory Form" (Appendix II).

4.3 Discussion of Major Site Categories

The archaeological site classification system employed in this report classifies recorded archaeological sites into six major categories based primarily on the type of modification observed and secondly on the basis of function inferred from environmental setting and existing ethnographic and historic documentation. The six major site categories are: 1) shell middens; 2) fish traps; 3) burial places; 4) rock art places; 5) tree resource utilization areas; and 6) isolated finds. Within each of the six categories a number of specific site types have been defined. The range of potential types within each major category along with a general discussion of the limitations inherent in the overall data base are presented below.

A seventh site category, historic places, is not included in this preliminary analysis. The major emphasis of this project was on locating and documenting native sites. However, where physical evidence of historic period structures was found, it was recorded. This is only a cursory definition of the white historic period resources on the landscape, and a large scale integrated archival and field project on the scale of the native site inventory is required to adequately document this resource. In the final report these historic site records will be included in the section dealing with the white history.

The final report will contain a refined site typology that takes into account available historic, ethnographic and environmental data. In the absence of subsurface archaeological samples this typology must be considered preliminary and a basis from which to generate future research projects.

4.3.1 Shell middens

All sites in this category share a single characteristic: the cultural deposition and accumulation of molluscan remains. These sites represent a wide range of potential site function or use based on morphology and ethnographic analogy. At one extreme are the large shell midden deposits that represent major village settlements and at the other are the small, seasonal resource processing camps.

Large, strategically placed shell middens, generally exceeding 100 m in length, have been classified as major villages. These sites represent major occupation loci for separate and distinct social units, probably local groups as defined by Drucker (1951), Kenyon (1980) and Haggarty (1982), that would have operated within defined territorial units. Major villages would have been occupied during the core winter months, November through February, and possibly year round by certain members of the social unit and would serve as the focus for winter ceremonial activity. It is at these sites that the larger, permanent post and beam or shed roof houses, typical of Nuu-chah-nulth (Nootkan) culture, would be erected. It would be from these villages that annual shifts in settlement to resource camps, if such were the case, would begin.

Smaller shell middens, usually less than 100 m in length and including those found in relic sea caves, have been classified as seasonal resource camps. They represent two major site uses or functions : 1) relatively long-term, more permanent sites; and 2) short-term, specific resource procurement sites. The longer term, more

permanent camps would function primarily as summer resource sites where semi-permanent shelters would have been erected. The short-term, specific resource procurement sites include all sites associated with daily or very short term procurement activities such as fish or shellfish collecting and processing. Temporary shelters such as small mat huts may have been erected but in many cases, no shelter at all would be required, particularly for those sites used on a day-to-day basis. Further subdivision of sites in this category is impossible without data from controlled, excavated samples. For example, site dimensions, particularly length measurements, are essentially continuous within the category. Further refinement of site function at this level can be obtained only through systematic analysis of subsurface samples.

In addition to the above resource functions, non-resource functions such as defense or lookout, can be inferred for some sites in this category based on ethnographic documentation and environmental setting. Defensive sites are situated on high promontories with sufficient space for a number of houses. These locations are obviously easy to defend. Lookout sites, situated in elevated locations, usually have a commanding view in all directions. Temporary structures were likely constructed at these locations.

4.3.2 Fish traps

The classification of sites within this major category into specific sub-types is based on trap morphology and microenvironmental

setting. Initially, all sites are divided initially on the basis of material used in their construction: stone or wood. All fish traps in the study area are stone alignments which usually out-number wood alignments for two reasons: 1) preservation and 2) location. Wood alignments such as wier structures commonly occur in or near the mouths of streams that support runs of anadromous fish and relatively few streams of this kind are present within the study area. Many stone alignments may have had wooden components when in use, although no physical evidence indicating this was the case remains today.

Stone alignments have been classified into three sub-types: 1) isolated, 2) aligned and 3) enclosed. The aligned and enclosed sub-types have been further subdivided into single-"V" and multiple-"V" varieties. In addition, the enclosed sub-type has a third variety, the pen complex. The isolated sub-type includes all intertidal rock features that, taken alone, do not constitute a trap but likely relate to isolated traps, such as wicker-wier structures, known to have been placed in the intertidal area in historic times (Fig. 14). The aligned sub-type includes both single- and multiple-"V" shaped traps oriented parallel to a generally linear or curvilinear intertidal area. Enclosed traps are distinguished by the fact that the outer-most stone alignments or walls of the trap are constructed to enclose all or portions of small embayments or to connect isolated bedrock outcroppings in order to create pen-like enclosures in the intertidal area.

It is important to note that this particular classification cannot

and does not suggest that specific sub-types or even varieties of traps relate to specific resource utilization. At present, we have no knowledge regarding the use of these traps other than that they were used to procure small, inshore schooling fish such as perch, herring, anchovy, etc.

4.3.3 Burial Places

Sites contained within this major category can be classified into sub-types on the basis of placement. Although all burials located within the study area were surface placements, the majority were found in relic sea caves. The few remaining burials were found at the base of large trees on or near small shell middens. All appear to relate to an historic period burial practice.

Although only two types of burial practices were noted and recorded within the study area, it is clear based on ethnographic documentation that burials also were placed on appropriate branches of spruce trees on or near village or camp locations. No evidence of this burial practice was observed despite our efforts in this regard. Based on past archaeological work on the Northwest Coast, many of the shell middens in the study area will also contain human burials. Again, no evidence of this burial practice was observed.

4.3.4 Rock art places

Rock art sites are generally classified into three distinct sub-types: 1) petroglyphs, 2) pictographs and 3) combination

petroglyph/pictograph sites. All rock art sites within the study area are of the petroglyph sub-type and all occur on the exposed outer coast shoreline.

4.3.5 Tree resource utilization areas

Included in this major site category are trees showing a wide range of utilization. Unlike other major site categories, tree resource utilization areas are not as a rule easily delineated on the landscape. Utilization of trees within a single tree resource area may vary from a single example of utilization to numerous examples within a relatively restricted or reasonably well-defined area such as a developing deltaic environment. While the latter situation easily lends itself to meaningful site designation, examples of single trees do not. They are, however, of equal cultural significance in terms of tree resource utilization for an area in general and, therefore, should be afforded equal site status. Tree resource areas with one or only a few examples of utilization at present are often the only evidence of native use of a particular geographic area. As such, they contribute substantially to our understanding of particular groups' overall utilization of resources within their traditional territory.

In the study area Western red cedar was the only tree species found to have been utilized. Examples of tree utilization are differentiated on the basis of 1) bark utilization or 2) wood utilization. Bark utilization is differentiated further on the basis of scar morphology: a) strip scar or b) slab scar. Wood utilization

also is differentiated on the basis of scar morphology: a) notch, b) slab, c) plank and d) stump. Isolated planks, canoes, canoe preforms, house structures are technically artifacts and are treated as isolated finds.

4.3.6 Isolated finds

This category is a catch-all for sites that show intentional modification but cannot be ascribed to any specific activity and isolated artifacts. Included would be isolated canoe runs or skids and cairn structures in the feature sub-type and canoe preforms and unassociated planks in the artifact category.

5.0 ARCHAEOLOGICAL SITE INVENTORY

The intensive archaeological site survey conducted within the present boundaries of the Broken Group Islands, Long Beach and West Coast Trail units of Pacific Rim National Park produced a total of 307 fully mapped and recorded prehistoric and historic archaeological sites. This total consists of 251 new sites and 56 known sites (Table 1).

Table 1. Compilation of the total number of archaeological sites by park unit, Pacific Rim National Park

PARK UNIT	TOTAL SITES	NEW SITES	PREVIOUSLY KNOWN SITES
Broken Group Islands	175	143	32
Long Beach	49	36	13
West Coast Trail	83	72	11
SITE TOTALS	307	251	56

Thirty-one of the 307 archaeological sites found and recorded are within the boundaries of existing Indian Reserves encompassed by present park boundaries and are, therefore, outside the jurisdiction of Parks Canada (Table 2). Twenty-four of the 307 sites relate to the white history while 283 relate to the native history (Table 2). This interim report will focus on the later group of sites.

Table 2. Compilation of native and white historic sites including sites on Indian Reserves, by park unit, Pacific Rim National Park

PARK UNIT	TOTAL SITES	WHITE HISTORIC SITES	NATIVE HISTORIC SITES	SITES ON INDIAN RESERVES
Broken Group Islands	175	11	164	5
Long Beach	49	5	44	9
West Coast Trail	83	8	75	17
SITE TOTALS	307	24	283	31

The results of the field programme are impressive not only in the total number of sites found and recorded but also in the wide range of specific site types represented. Preliminary interpretation of the data are presented by park unit in the following sections.

5.1 The Broken Group Islands Unit

Of the 283 archaeological sites known from the three park units, 164 or 58% occur within the Broken Group Islands unit. Five of these occur within the boundaries of the three reserves of the Sheshaht Band within the study area. Of the 164 sites, 32 or 20% were known previously as a result of an earlier archaeological survey of the Barkley Sound area (St. Claire 1976). Archaeological sites located during this 1976 survey consisted entirely of large shell midden (village) and fish trap sites. None of these sites were mapped due primarily to the geographic scope of the project and secondly to the level of funding secured to conduct the survey. All 32 of these sites were fully mapped and recorded during the course of the present survey.

The 164 archaeological sites recorded within the Broken Group Islands unit have tentatively been classified by site type and sub-type in Table 3.

Table 3. Preliminary classification of archaeological sites by site type and sub-type, Broken Group Islands unit

SITE TYPE/SUB-TYPE	FREQUENCY	PERCENT
Shell Middens		
Major Villages	14	
Camps	62	
Defensive Locations	2	
Lookout Locations	<u>2</u>	
SUB-TOTAL	80	48%
Fish Traps	39	24%
Burial Places		
Cave	18	
Non-Cave	<u>3</u>	
SUB-TOTAL	21	13%
Tree Resource Areas	18	11%
Isolated Finds	6	4%
UNIT TOTAL	164	100%

Eighty or 48% of the 164 sites known from the Broken Group Islands unit are shell middens and represent some form of occupation, either long term or temporary. Of the remaining 84 sites, 63 (fish traps, tree resource areas and isolated finds) or 38% are associated with specific resource procurement, principally small fish and cedar products. It should be noted that these figures are not representative of resource procurement in general or even of specific resource procurement

strategies. For example, included in the shell midden category are specific types of sites, particularly shellfish processing locations, that are both temporary occupation as well as resource procurement sites. These types of sites are difficult to isolate without systematic sampling and have, therefore, been left in the more general shell midden category. The remaining 21 sites or 13% are burial places. It is important to note that no rock art sites, petroglyphs or pictographs, were found in the Broken Group Islands unit.

The distribution of archaeological sites within the Broken Group Islands unit is presented by site type and, where applicable, by sub-type in Figures 7 through 13.

5.1.1 Shell middens

Of the 80 shell middens 14 have been classified as major villages, or portions of major villages (Fig. 7). These 14 sites represent ten separate village locations which is a minimum estimate for the number of local groups operating in the Broken Group Islands. It is possible that as many as five or more of the smaller shell middens presently included in the camp sub-type also functioned as major village sites for smaller local groups.

Sixty-two sites in the Broken Group Islands have been classified as camps (Fig. 8). They range in size from a few metres to nearly 100 m in length. Two are located in relic sea caves. The remaining four shell middens are specialized habitation sites, two are defensive sites (Fig. 9) and two are lookout sites (Fig. 10).

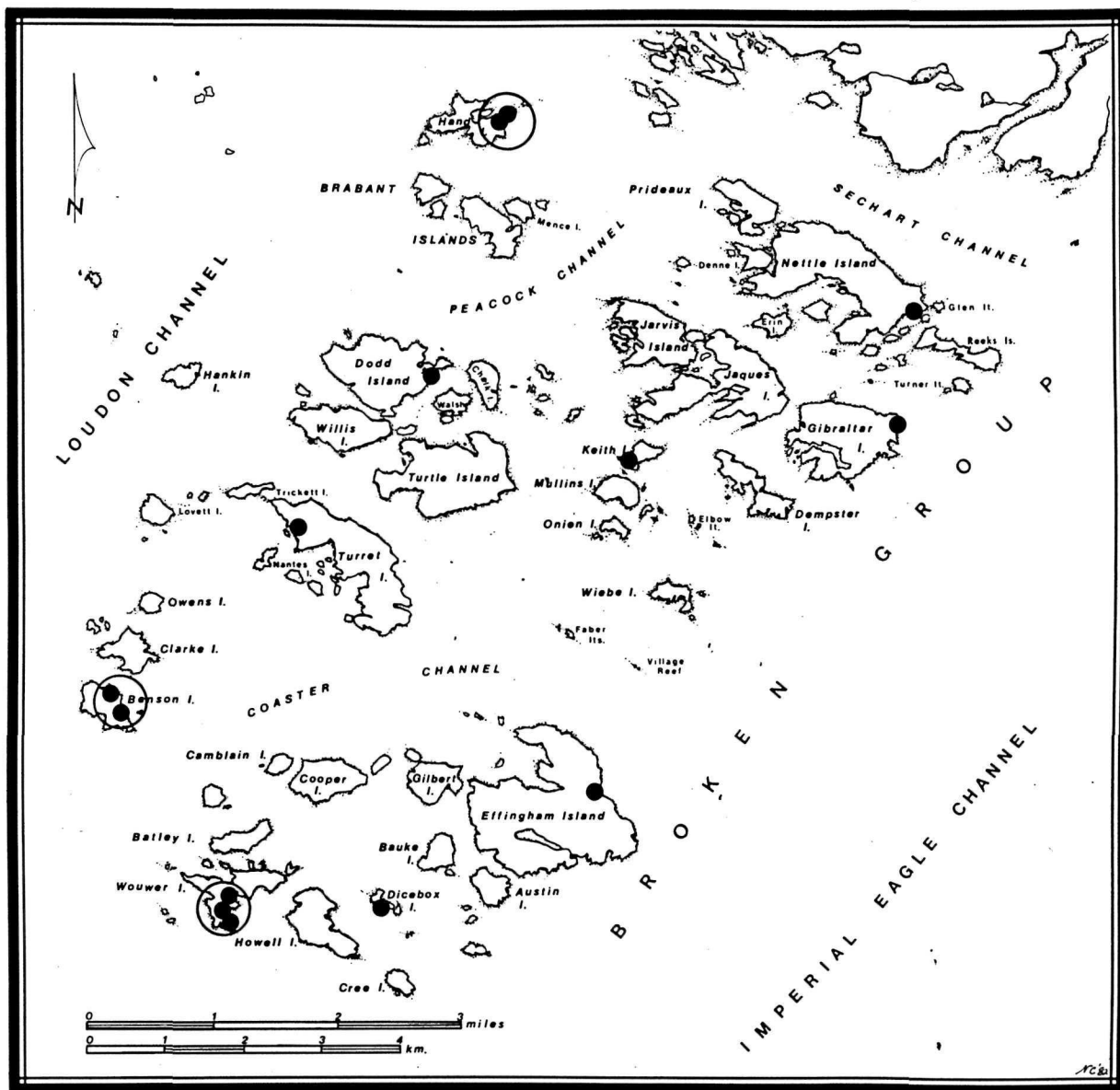


Fig. 7. Distribution of major village sites in the Broken Group Islands unit.

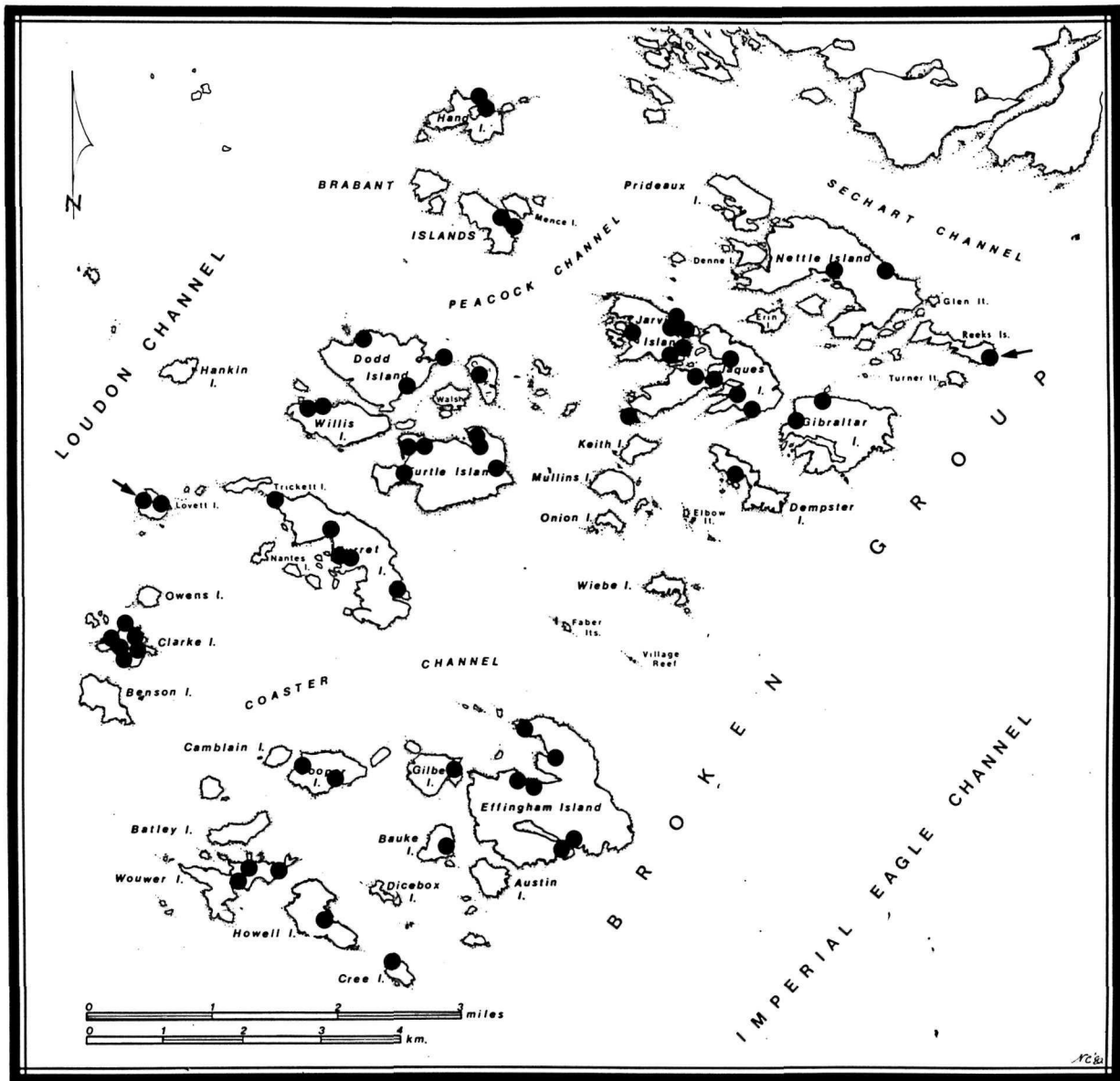


Fig. 8. Distribution of camps in the Broken Group Islands unit. Habitation cave indicated by ↗.

The two habitation caves recorded in the Broken Group Islands unit, one located on the eastern end of Reeks Island and the other on the western end of Lovett Island (Fig. 8), probably served as temporary shelters used on an intermittent basis by a small number of people. These sites obviously offered the advantage of protection without having to construct even temporary shelters.

The two defensive sites, one on Dicebox Island, the other on Clarke Island (Fig. 9), each share evidence of house features. At least 21 house depressions were mapped on Dicebox Island, the larger of the two sites. It is surprising, given the fact that there were likely ten or more local groups operating in the Broken Group Islands, that only two defensive sites were located. It seems unlikely that both could have served the defensive requirements of all local groups simultaneously during periods of conflict. Some groups must have employed other tactics during times of hostility, perhaps utilizing inland locations on the larger islands. It is also possible that the use of these two prime defensive locations was restricted solely to high ranking individuals from a number of groups with lower ranking people and commoners being left to defend themselves in other ways.

The two examples of lookout sites in the Broken Group Islands, one on the west end of Wouwer Island and the other on the east end of Cree Island (Fig. 10), are ideal locations for observing the movements of marine mammals and human groups, knowledge of which was essential for survival. These locations probably were occupied on an intermittent basis by individuals for varying lengths of time. Both sites are

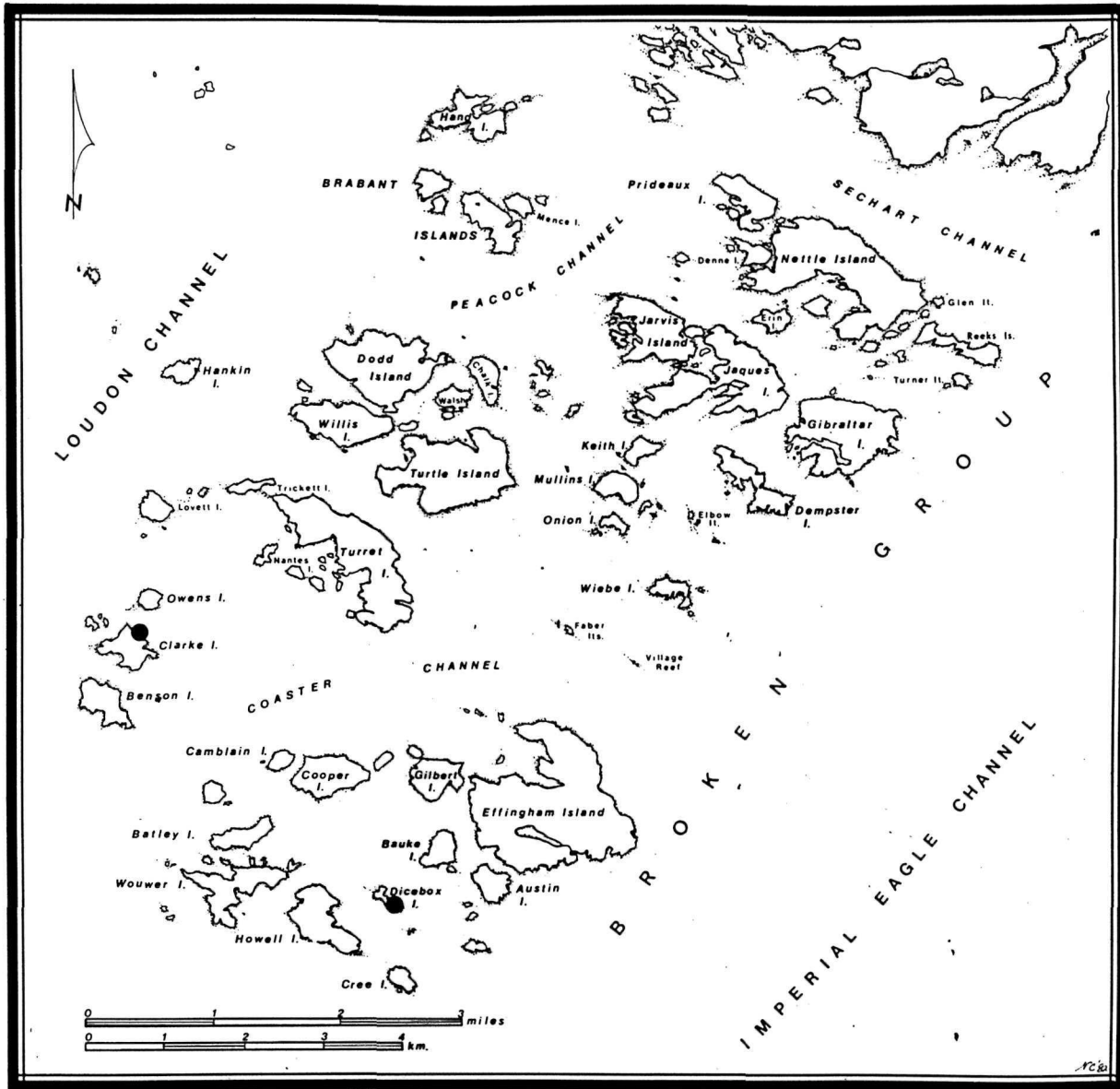


Fig. 9. Distribution of defensive sites in the Broken Group Islands unit.

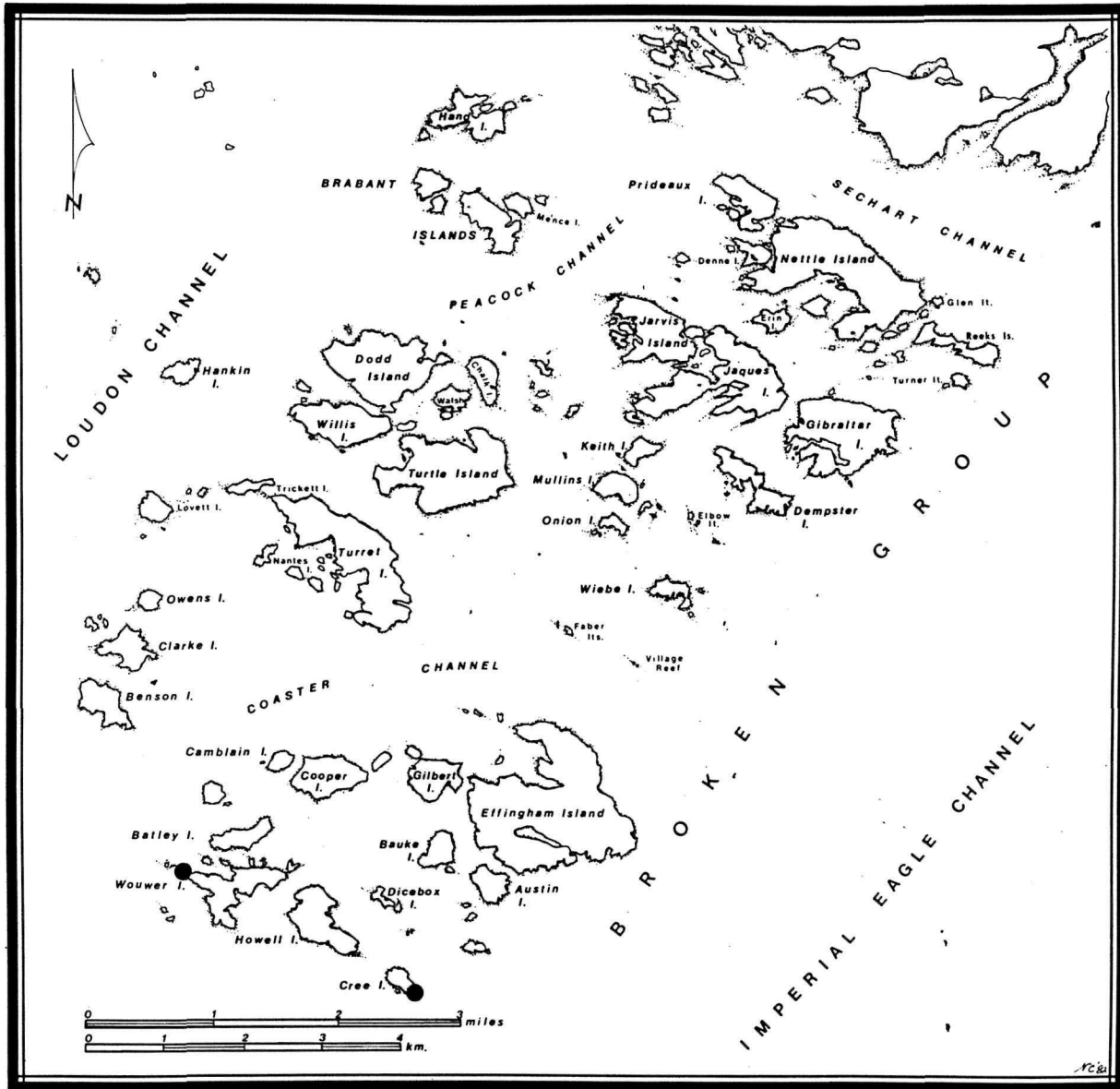


Fig. 10. Distribution of lookout sites in the Broken Group Islands unit.

relatively small and afford a commanding view of the open Pacific Ocean. As well, the site on Wouwer Island overlooks Loudon Channel and the site on Cree Island overlooks Imperial Eagle Channel.

5.1.2 Fish traps

Fish trap sites (Fig. 11) constitute the second largest site category in the Broken Group Islands. Of the 164 sites, 39 or 24% are fish traps. All 39 fish traps are of the stone wall type and range in form from single rock wall alignments located in narrow embayments to large trap complexes consisting of 12 or more individual pool areas, constructed within cobble platforms located behind protected reefs. Also included are pen-like stone wall structures that connect sections of bedrock, and thus enlarging the entrapment area. All fish trap sites in the Broken Group Islands probably relate to the capture of seasonally abundant, small in-shore schooling fish, such as herring, perch, anchovy, etc.

5.1.3 Burial places

The 21 burial places located in the Broken Group Islands are sub-divided into two subtypes: 1) cave burials and 2) non-cave burials. All are surface placements. The inclusion of historic period trade goods with many of the 18 cave burials and the use of manufactured burial boxes for others indicate that these are an historic period phenomenon. The three non-cave burials, one each on Dodd, Jarvis and

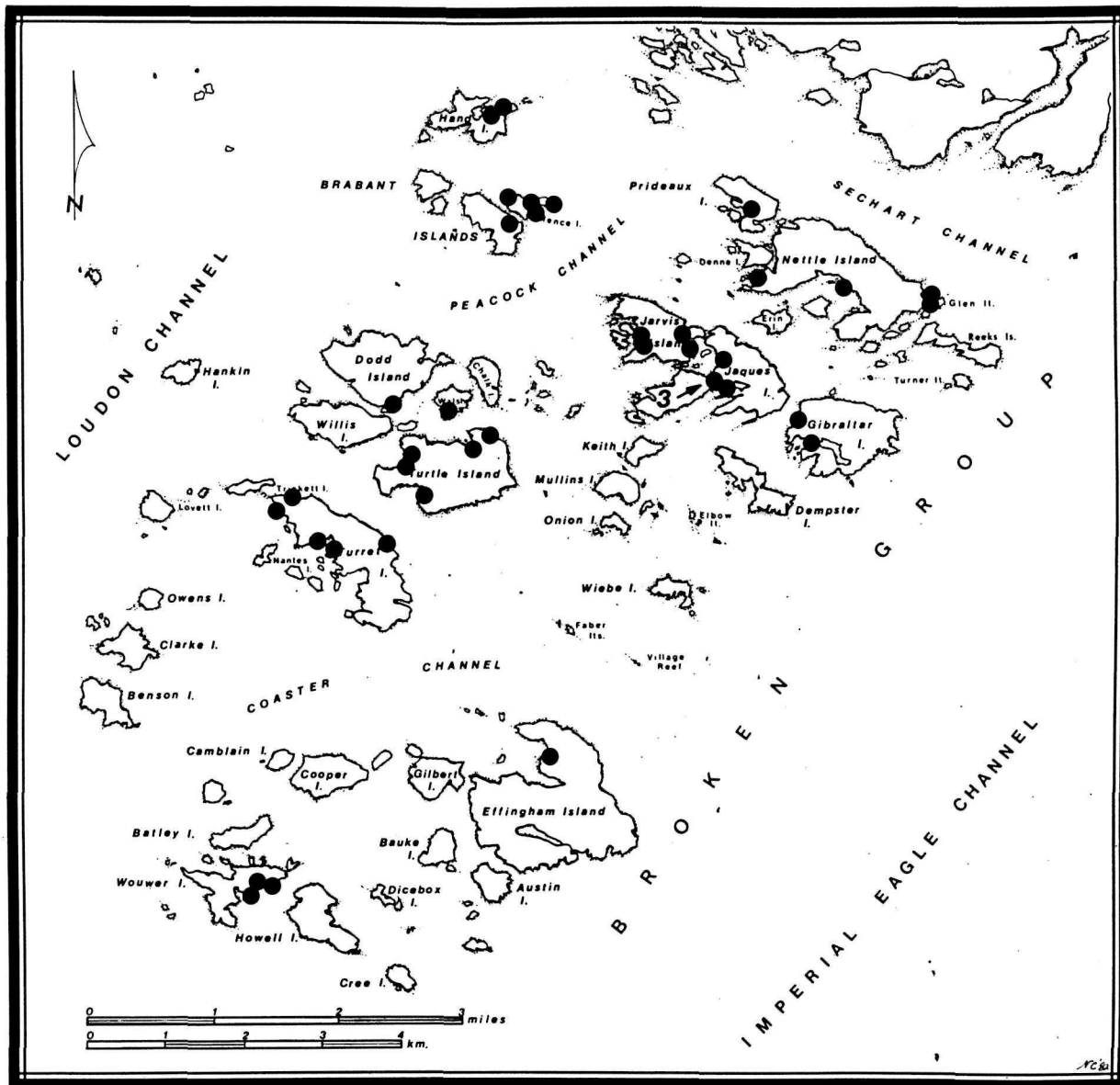


Fig. 11. Distribution of fish trap sites in the Broken Group Islands unit.

Jaques Island, likely also date to the historic period. Individual burials represent a wide range of burial practice. For example, some individuals are simply wrapped in cedar bark mats and placed on the surface of burial caves while others are contained in traditional bent wood cedar boxes or some form of European style coffin. One individual was placed in a Camphorwood Chinese chest. Burial places and their contents remain an extremely sensitive issue with all native people and deserve to be treated with utmost respect. Due to the sensitive nature of this site category a figure locating burial places has not been included in this interim report.

5.1.4 Tree resource utilization areas

Within the Broken Group Islands, 18 tree resource utilization areas have been identified (Fig. 12). Numerous trees exhibiting scars resulting from bark stripping activity as well as trees showing scars resulting from plank removal were noted and recorded. Scars of bark stripped trees are characteristically triangular in shape and can run eight to ten metres up the tree trunk. The bottom of the scar shows evidence of having been cut at right angles to the trunk and both sides of the scar as well as the bottom usually show evidence of bark healing. The examples of plank removal all occur on fallen logs. Plank scars range in size from one half metre to one and a half metres in width and from one metre to four metres in length. Wedge scars are evident on some of the sections of plank removal. All examples in this site category are Western red cedar trees.

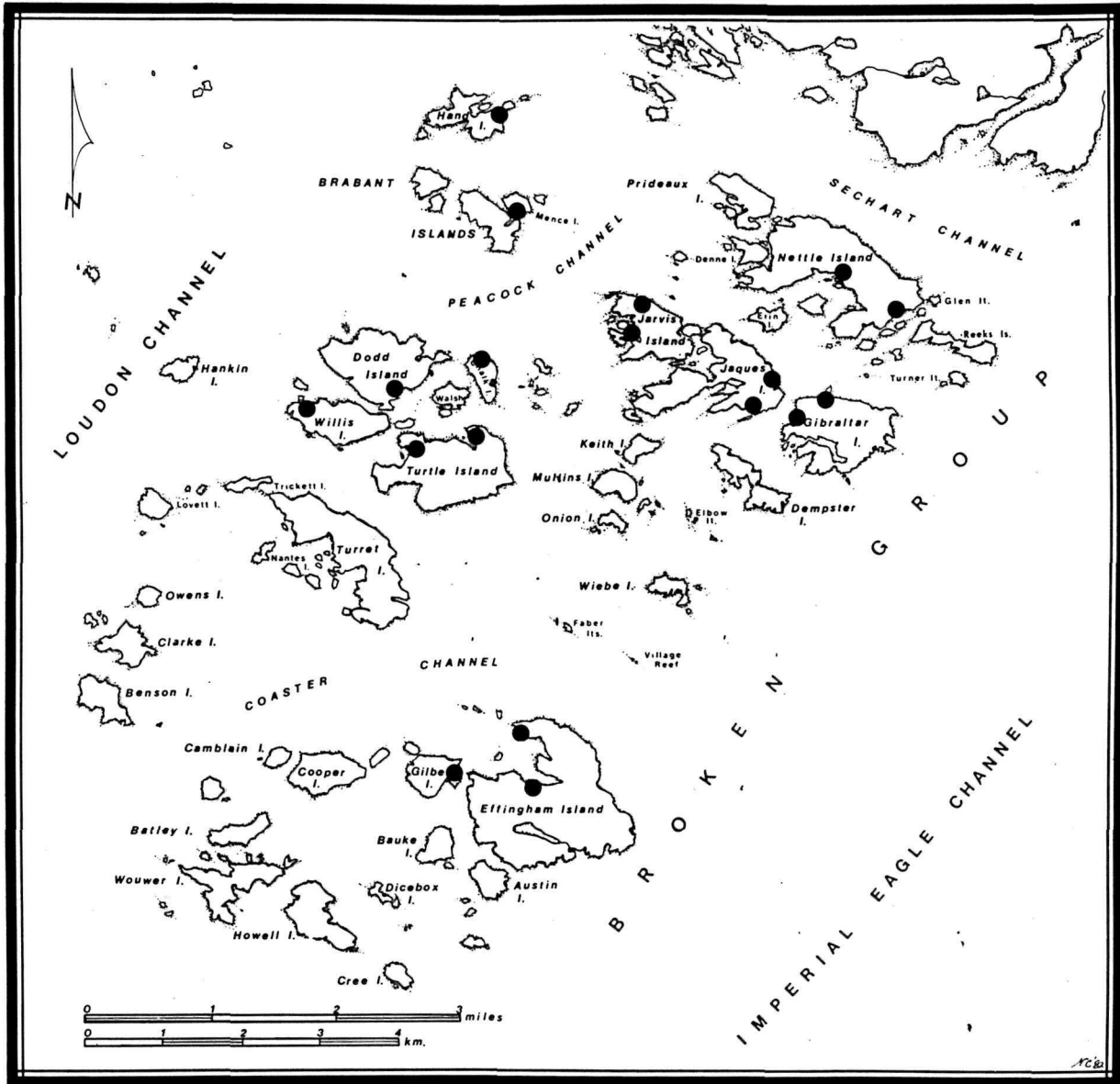


Fig. 12. Distribution of tree resource utilization areas in the Broken Group Islands unit.

5.1.5 Isolated finds

Three of the six sites from the Broken Group Islands in this category (Fig. 13) are isolated canoe runs or skids that are not associated with a village or camp location while a fourth consists of a cleared trench. This trench, located on Turtle Island, is associated with a small shell midden but is sufficiently unique to warrant separate status. The remaining two sites, one on Walsh Island and the other on a small islet in the Jaques-Jarvis lagoon area, show intentional clusterings of beach cobbles. The series of cobble clusters on Walsh Island may be associated with the use of wicker constructed traps in this area similar to that shown in Fig. 14. The single rock cluster recorded in the Jaques-Jarvis lagoon area is located high in the intertidal area and is difficult to interpret. Given its location and size it may represent a small hunting blind.

5.2 The Long Beach Unit

The 44 archaeological sites known from the Long Beach unit represent 16% of the 283 native historic sites known from Pacific Rim National Park. Although no previous systematic archaeological survey had been conducted within this park unit, 16 sites had been reported. None had been mapped and recorded thoroughly. As a result of the present survey, three of these sites were cancelled as they could not be substantiated in the field. The remaining 13 sites were mapped and fully recorded during the course of the present survey. They represent

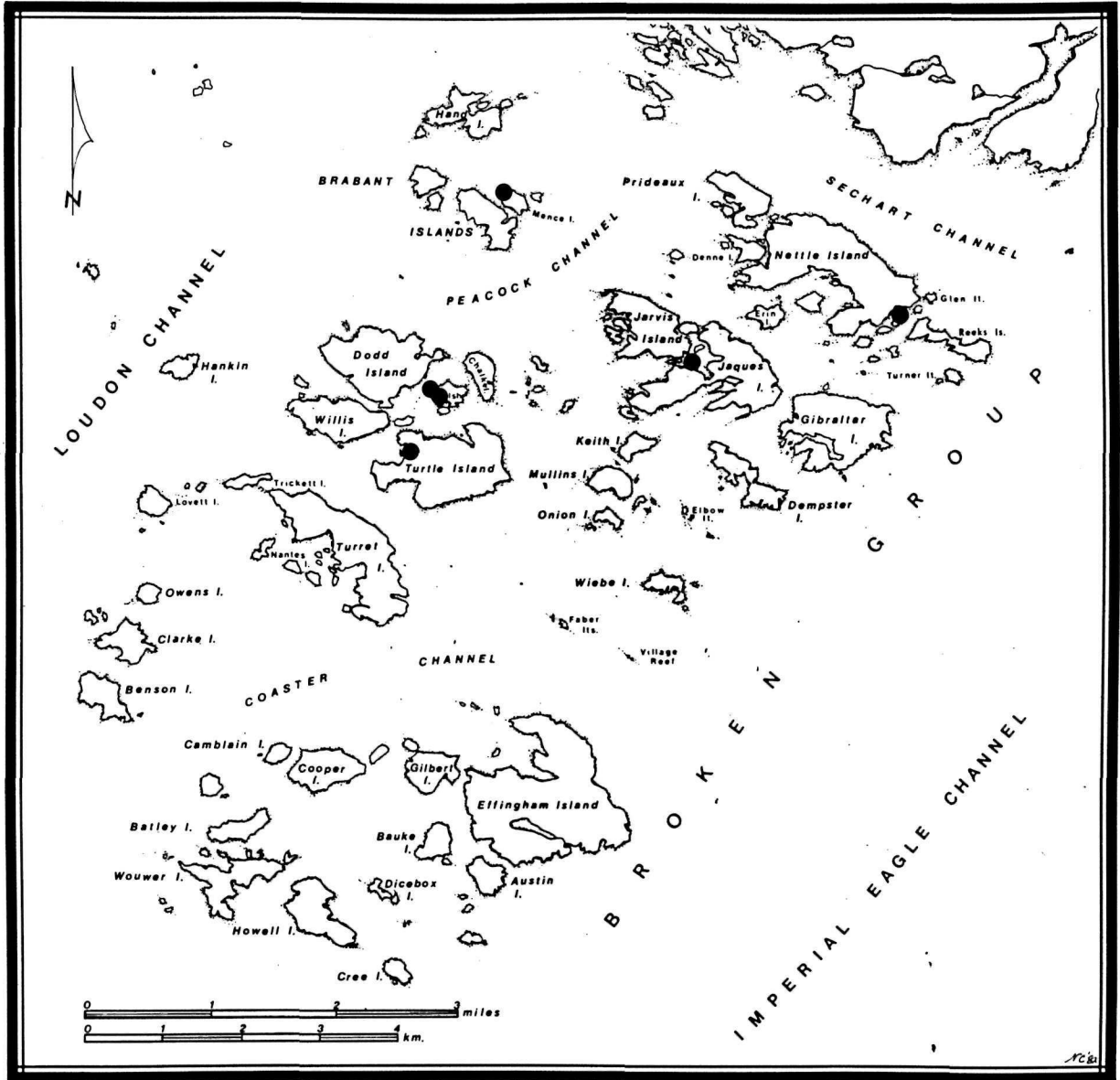


Fig. 13. Distribution of isolated finds in the Broken Group Islands unit.

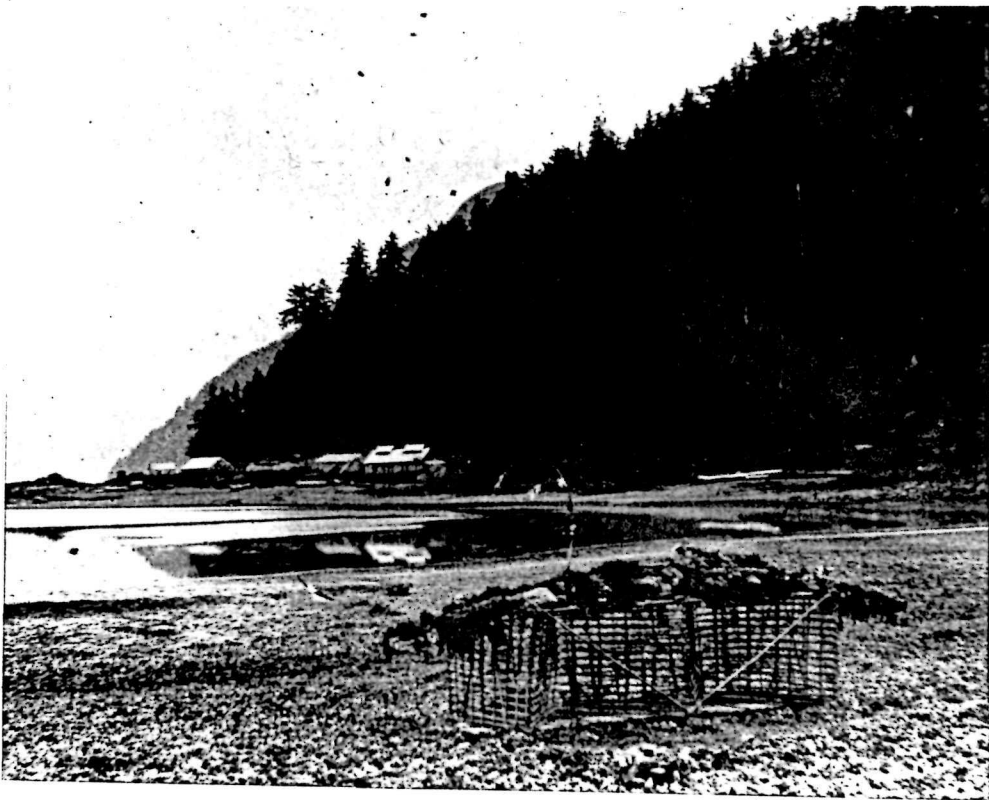


Fig. 14. Intertidal wicker trap in Moachat territory, ca. 1912.

30% of the total number of sites now known for the Long Beach unit. Nine of the 44 sites included in the total for this park unit occur within the boundaries of the three Clayoquot reserves (five sites) and the two Ucluelet reserves (four sites).

The 44 archaeological sites known from the Long Beach unit have been tentatively classified by site type and sub-type in Table 4. Thirty-four or 77% of the 44 sites are shell middens, 8 or 18% are associated with resource procurement, in particular cedar products, and rock art places and isolated finds each are represented by one site.

Table 4. Preliminary classification of archaeological sites by site type and sub-type, Long Beach unit

SITE TYPE AND SUB-TYPE	FREQUENCY	PERCENT
Shell Middens		
Major Villages	6	
Camps	22	
Defensive Locations	2	
Lookout Locations	<u>4</u>	
SUB-TOTAL	34	77%
Fish Traps	1	2%
Rock Art Places	1	2%
Tree Resource Areas	7	16%
Isolated Finds	1	2%
UNIT TOTAL	<u>44</u>	<u>99%</u>

The distribution of archaeological sites within the Long Beach unit is presented by site type and, where applicable, by sub-type in Figures 15 through 22.

5.2.1 Shell middens

There are 34 shell middens representing four sub-types in the Long Beach unit. Six of the large middens have been classified as major villages. Five of the six are located along the exposed Long Beach section of shoreline while the remaining site is located in the protected zone on Indian Island (Fig. 15). Twenty-two sites have been classified as camps (Fig. 16), two sites are defensive locations (Fig. 17) and four are lookout locations (Fig. 18).

The exposed and relatively inaccessible nature of much of the shoreline in this park unit obviously has limited the number of potential habitation areas and therefore the number of potential local groups utilizing this area. It is estimated, based on the number of large middens present, that there were at least six autonomous local groups operating in the area, five on the outside coast and one inside on Indian Island. The two defensive sites are small but classic in that they both represent utilization of natural landforms. The four lookout sites are again situated on exposed headlands which have a commanding view of the surrounding waters.

5.2.2 Fish traps

Only one fish trap was located in this park unit (Fig. 19). This

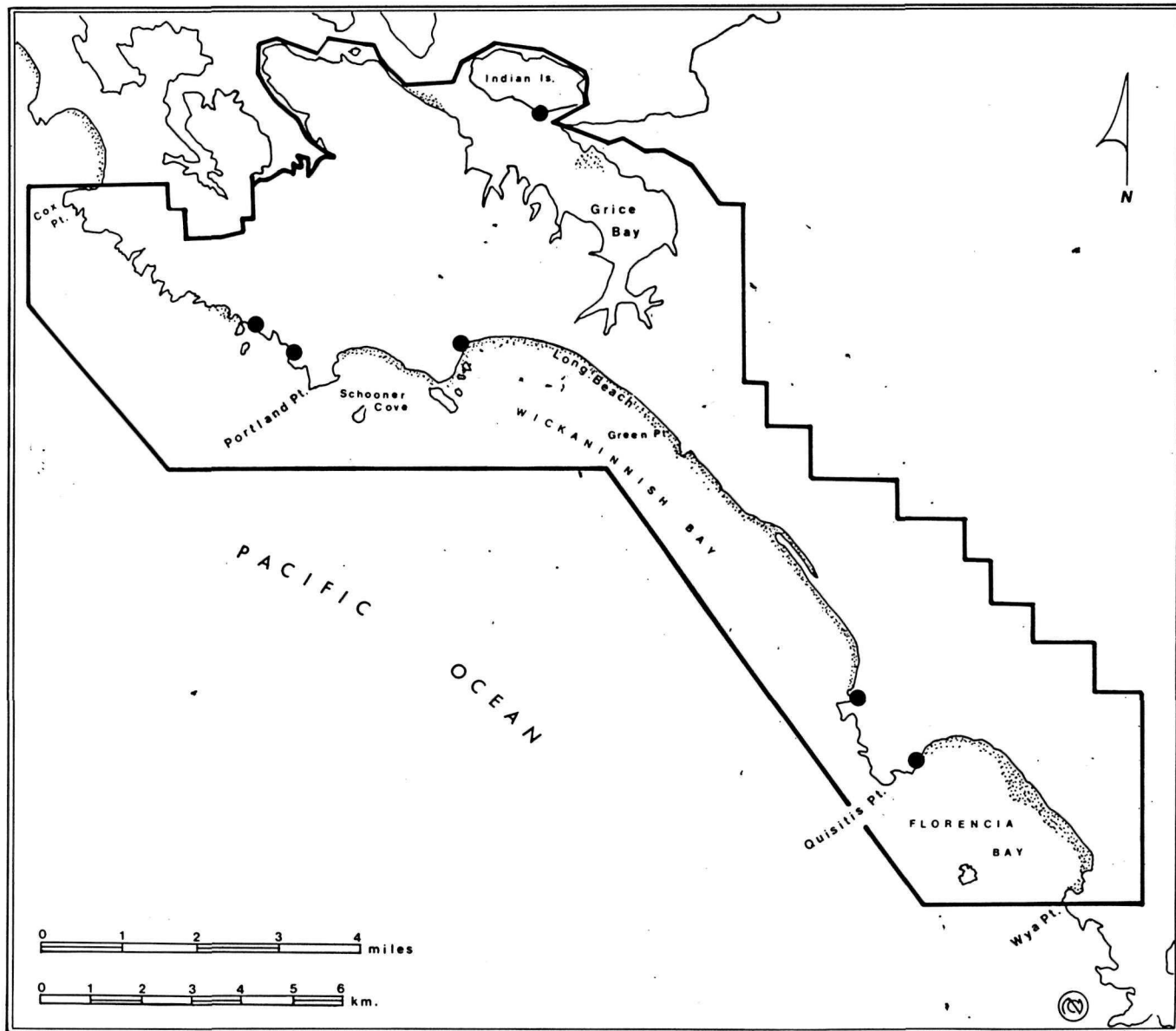


Fig. 15. Distribution of major village sites in the Long Beach unit.

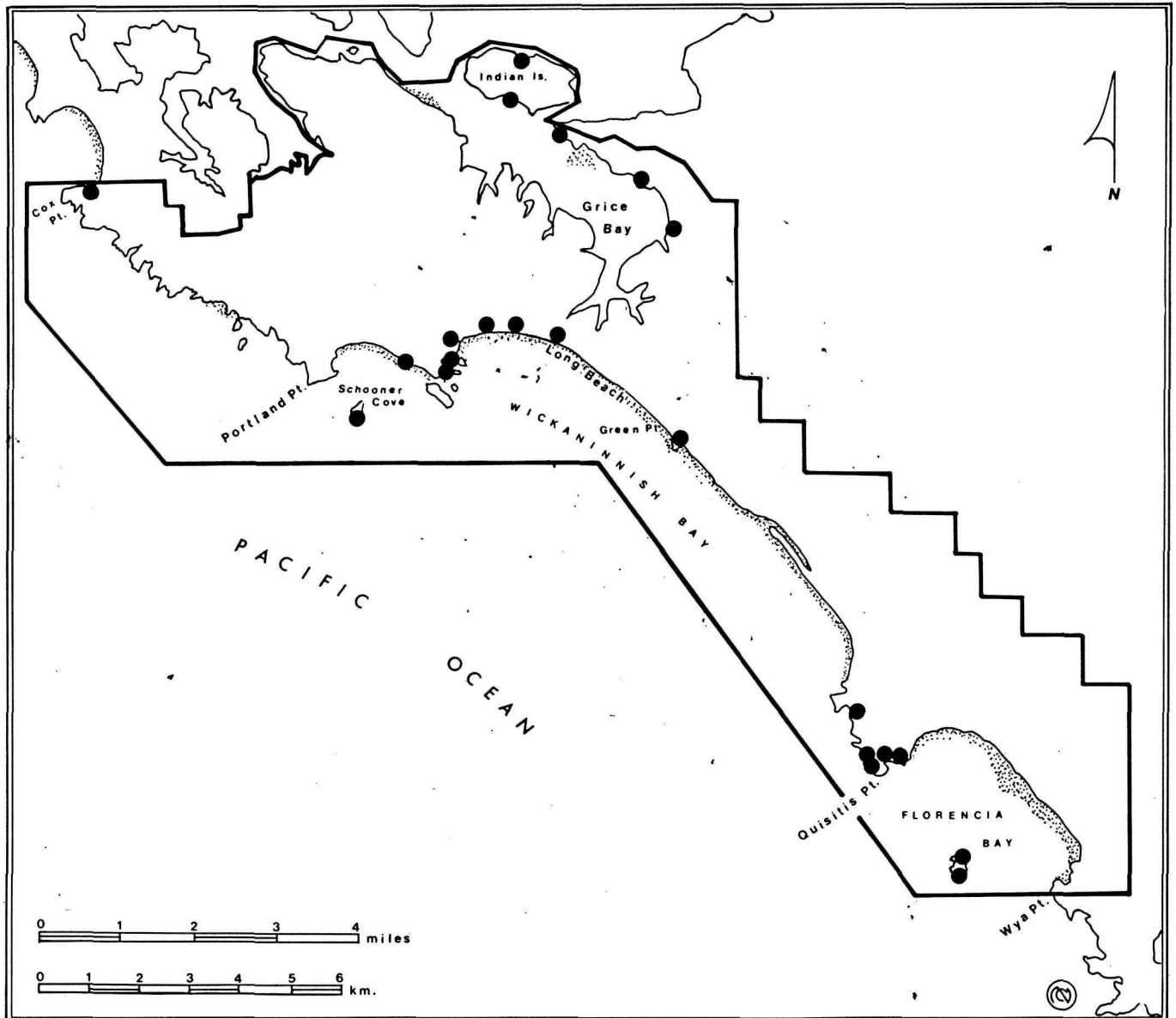


Fig. 16. Distribution of camp sites in the Long Beach unit.

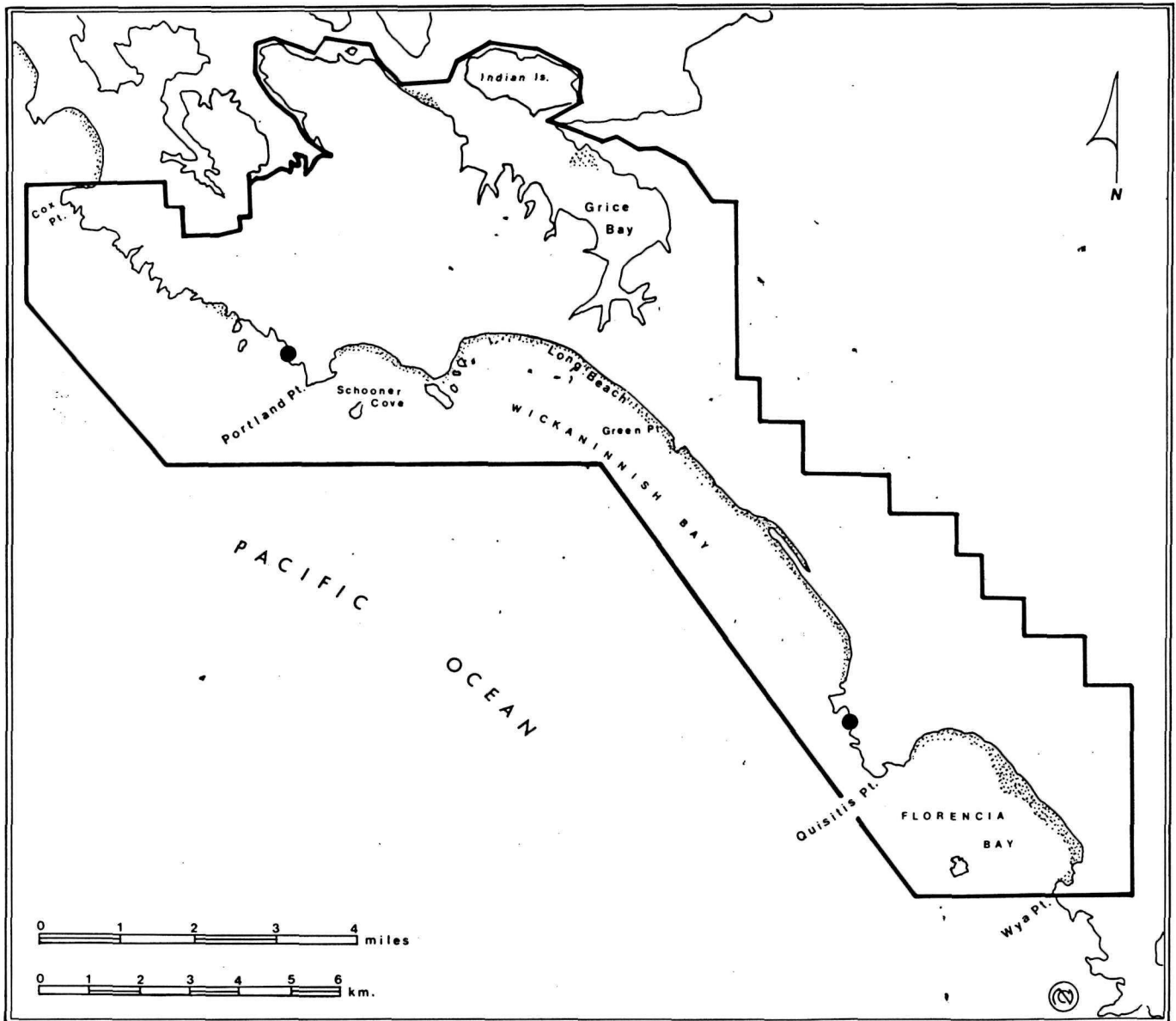


Fig. 17. Distribution of defensive sites in the Long Beach unit.

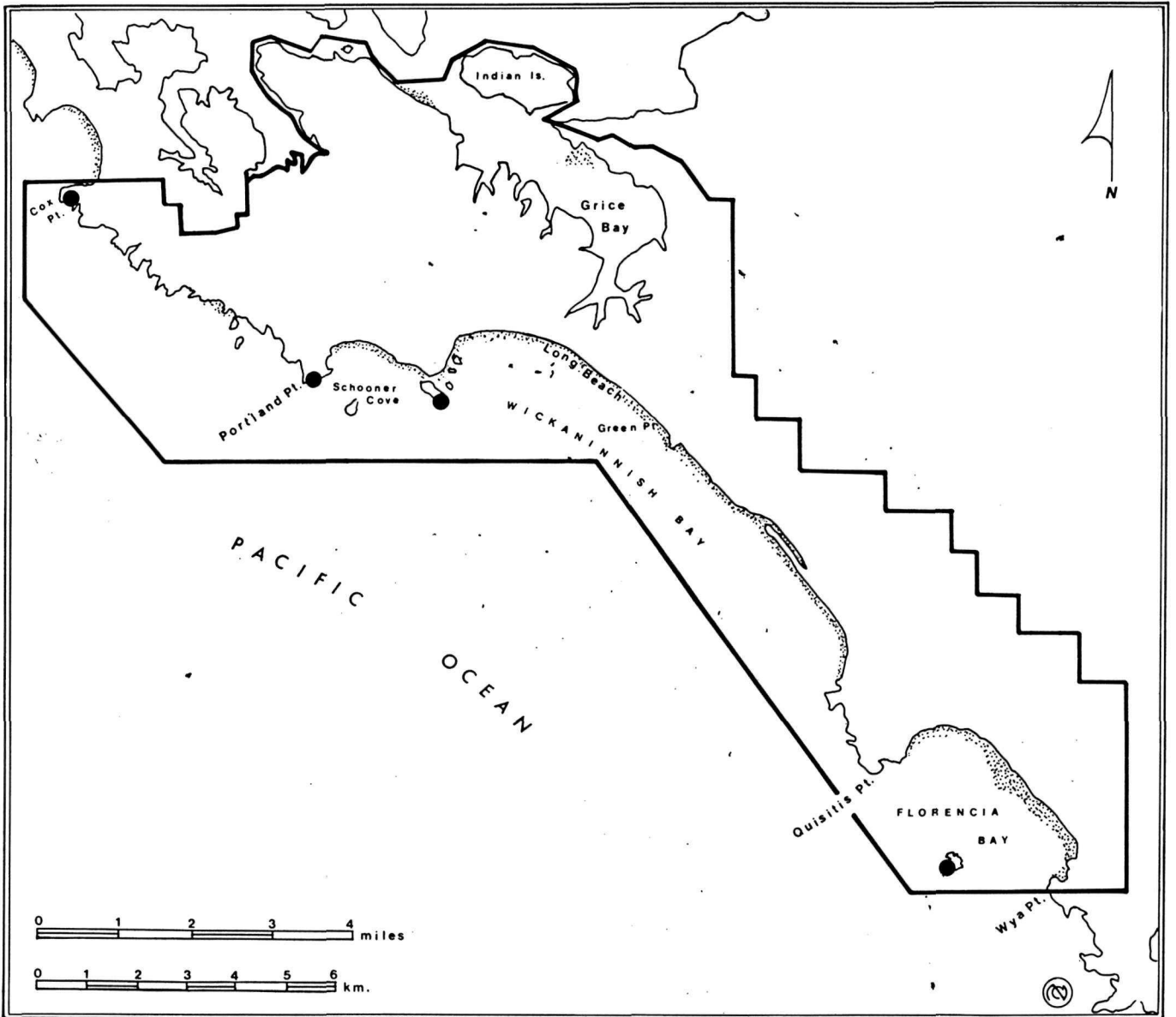


Fig. 18. Distribution of lookout sites in the Long Beach unit.

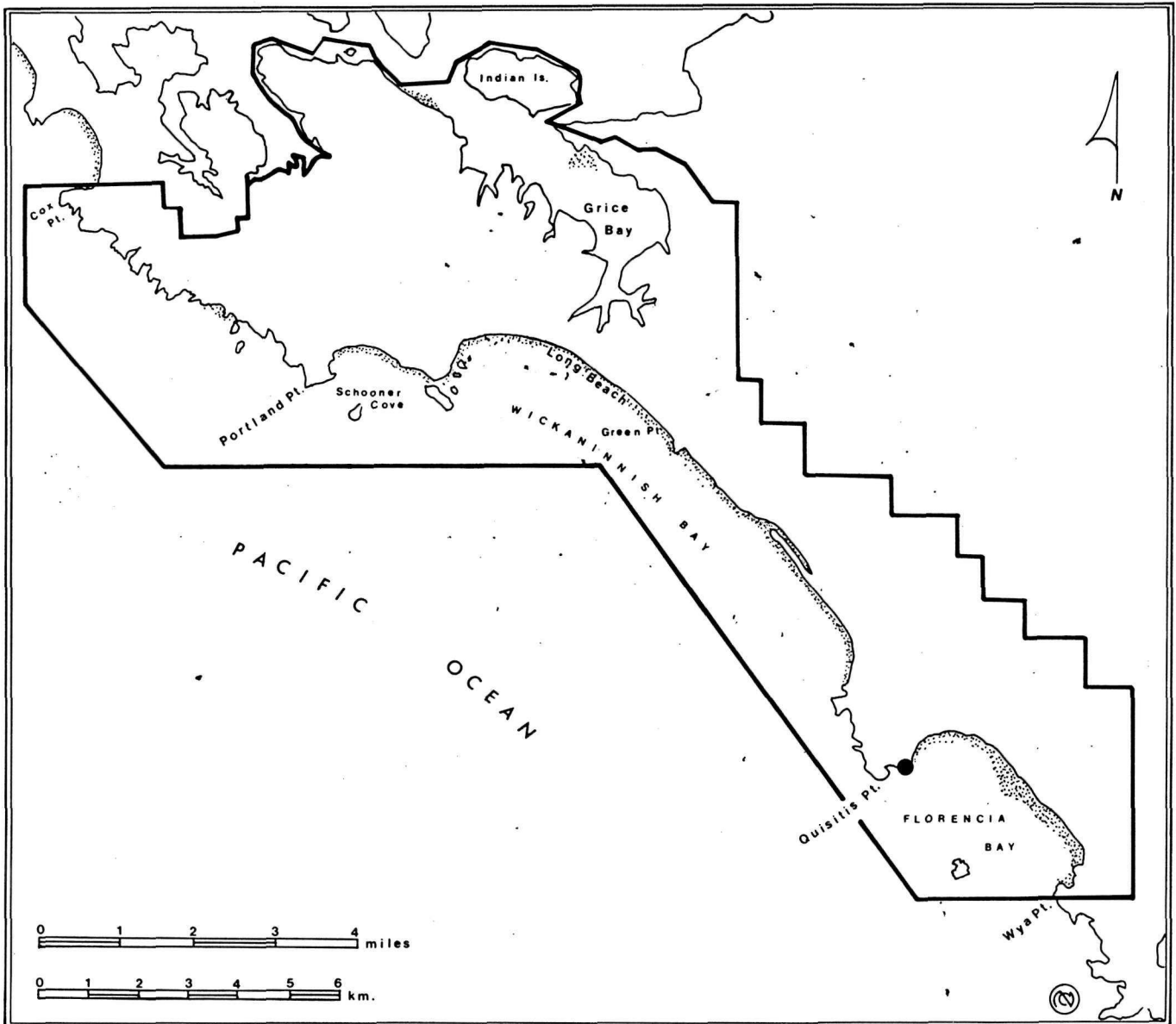


Fig. 19. Location of the fish trap site in the Long Beach unit.

single stone wall trap is located in a protected setting associated with a large canoe run situated in front of a major village site. As expected, fish traps are extremely rare in the exposed zone and surprisingly absent in the protected Grice Bay area.

5.2.3 Rock art places

The one rock art site (Fig. 20) known from this park unit is a petroglyph consisting of at least five zoomorphic figures. The figures on the panel are thought to represent a fish, a baby seal or bird figure, a seal or fish, a fish, and a halibut or possibly red snapper. This panel, located high in the storm toss zone, is vertical and oriented perpendicular to the adjacent shoreline.

5.2.4 Tree resource utilization areas

Six of the seven tree resource utilization area sites (Fig. 21) found in the Long Beach unit consist of examples of bark stripping. The remaining site consists of a fallen tree showing evidence of plank removal. All are modified Western red cedar trees.

5.2.5 Isolated finds

The single site in this category (Fig. 22) consists of an isolated canoe run feature on Indian Island.

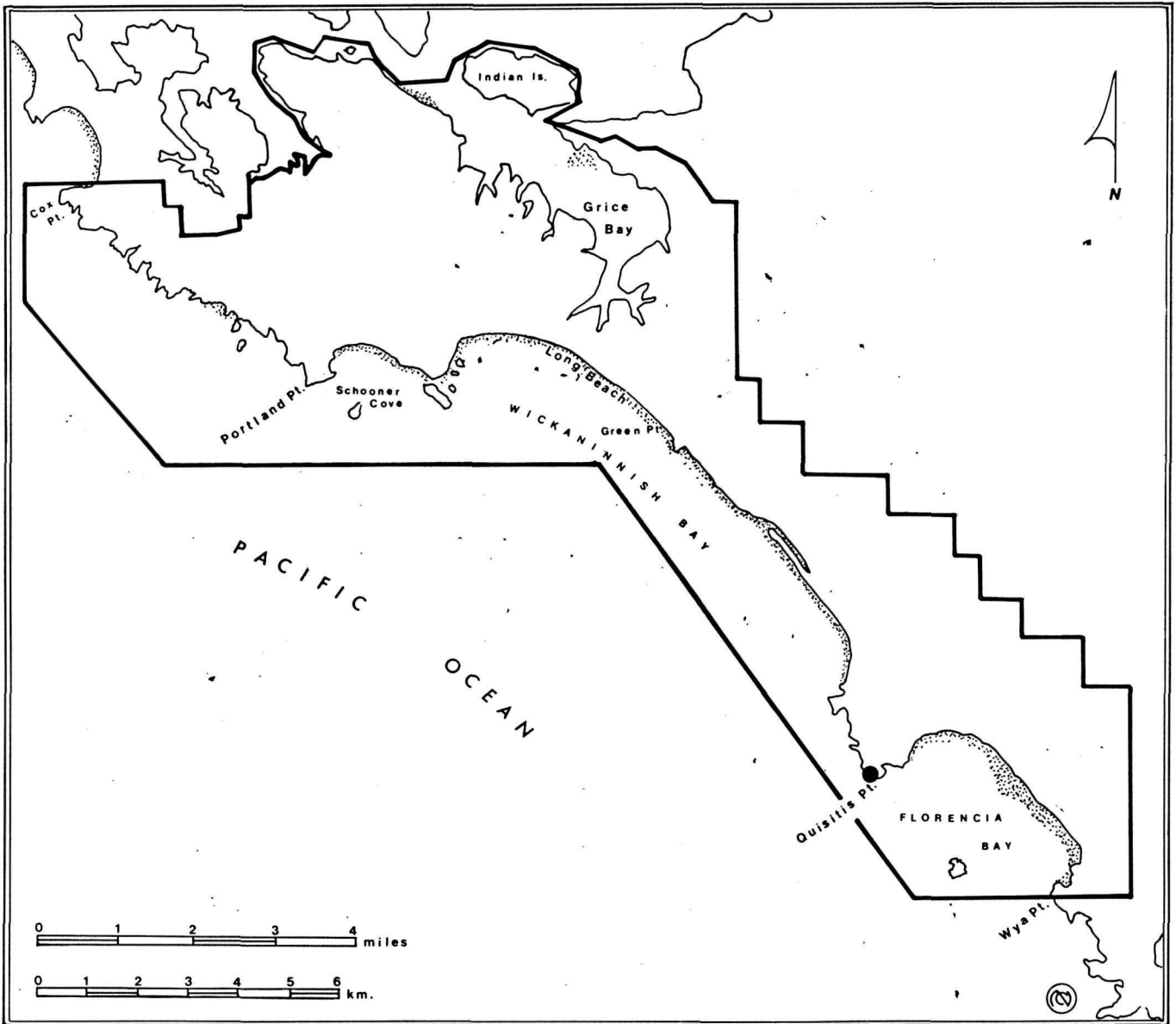


Fig. 20. Location of the rock art site in the Long Beach unit.

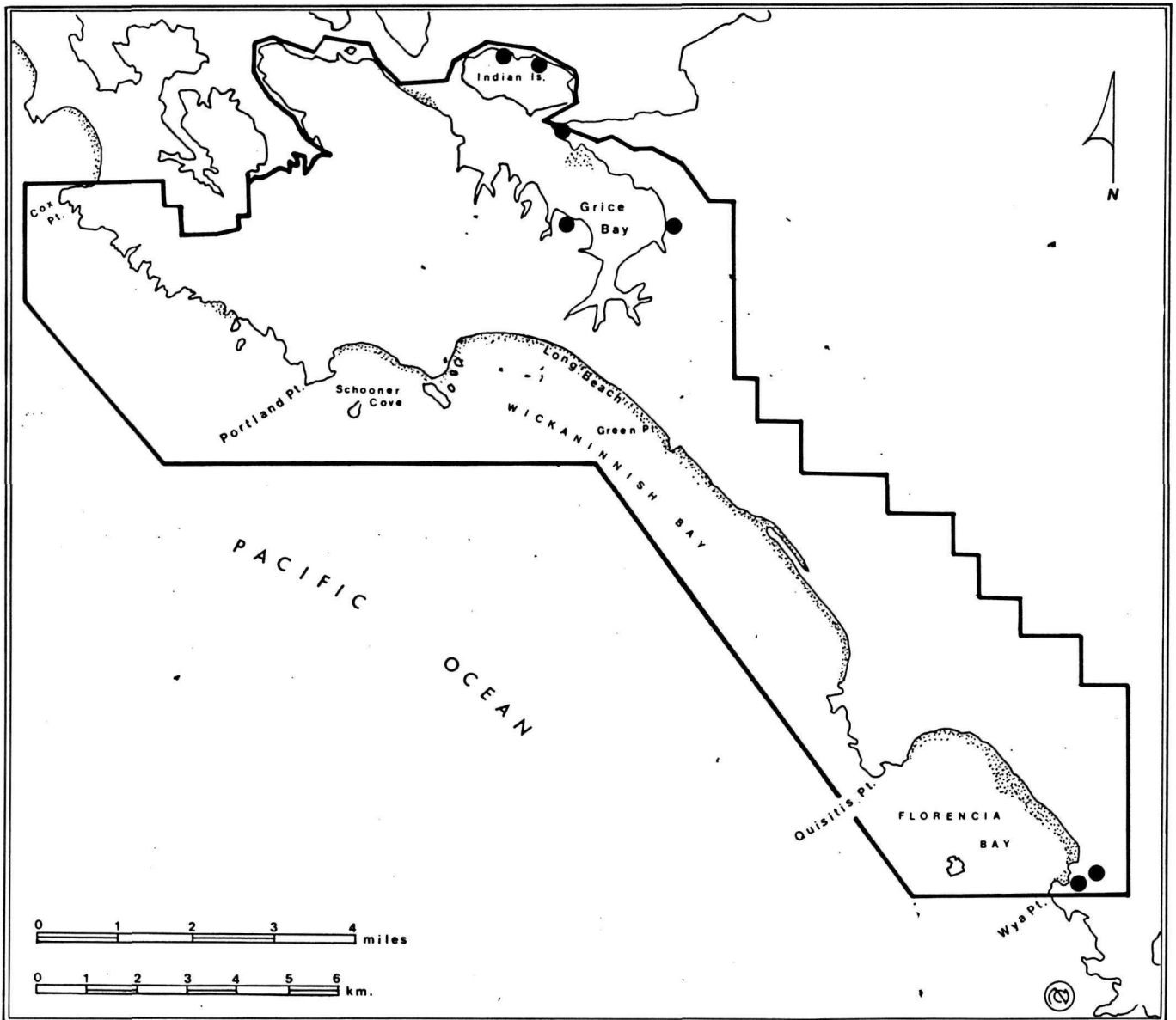


Fig. 21. Distribution of tree resource utilization areas in the Long Beach unit.

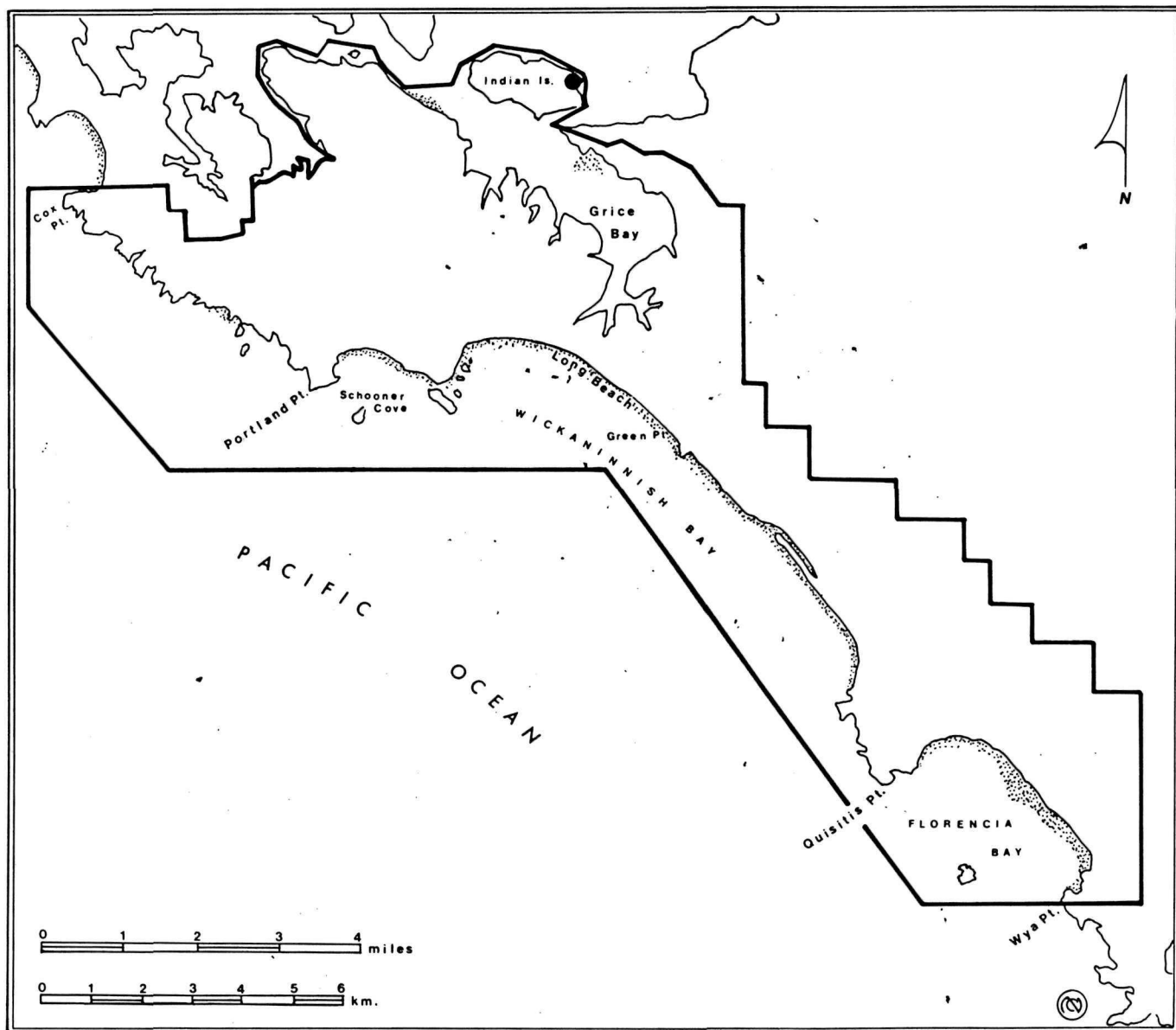


Fig. 22, Location of the isolated find in the Long Beach unit.

5.3 The West Coast Trail Unit

The 75 archaeological sites known for the West Coast Trail unit of Pacific Rim National Park represent 26% of the 283 sites. Like the Long Beach unit, no previous systematic archaeological survey had been conducted within this park unit although 12 sites had been recorded prior to the present survey. None had been formally mapped and recorded through field observation by trained personnel. Eleven of these 12 sites were recorded formally during the course of the present survey and represent 15% of known sites from the West Coast Trail unit. The remaining site was cancelled as it could not be substantiated in the field. Also, it should be noted that 17 of the 75 sites included in the site total for this park unit occur within the boundaries of various reserves of the Ohiaht, Nitinaht and Pacheenaht Bands. Four sites occur on Ohiaht reserves, 12 on Nitinaht reserves and one on a Pacheenaht reserve.

The 75 archaeological sites known from the West Coast Trail unit have been tentatively classified by site type and sub-type in Table 5. Thirty-nine or 52% of the 75 sites are shell middens, 27 or 36% are associated with resource procurement of cedar products, six or 8% are rock art places, two or 3% are burial places and there is one isolated find.

The macroenvironmental setting of the West Coast Trail is largely responsible for the character of the archaeological site sample. For example, the large number of tree resource utilization areas are found in the Tsusiat, Hobiton and Nitinat lake system, an area known today and in the past as a prime cedar region.

Table 5. Preliminary classification of archaeological sites by site type and sub-type, West Coast Trail unit

SITE TYPE AND SUB-TYPE	FREQUENCY	PERCENT
Shell Midden		
Villages	13	
Camps	25	
Defensive	1	
Lookout	<u>0</u>	
SUB-TOTAL	39	52%
Burial Places	2	3%
Rock Art Places	6	8%
Tree Resource Areas	27	36%
Isolated Finds	1	1%
<u>UNIT TOTAL</u>	<u>75</u>	<u>100%</u>

The distribution of archaeological sites within the West Coast Trail unit is presented by site type and, where applicable, by sub-type in Figures 23 through 28.

5.3.1 Shell middens

The 39 shell middens have been classified into three sub-types. There are 13 shell middens which represent ten major villages, 25 camp locations and one defensive site. The absence of lookout sites is surprising given the similarity of the outer coast shoreline to that of the Long Beach unit. The large middens are situated near headlands where there is access and protection from prevailing sea conditions and at the Nitinat Narrows

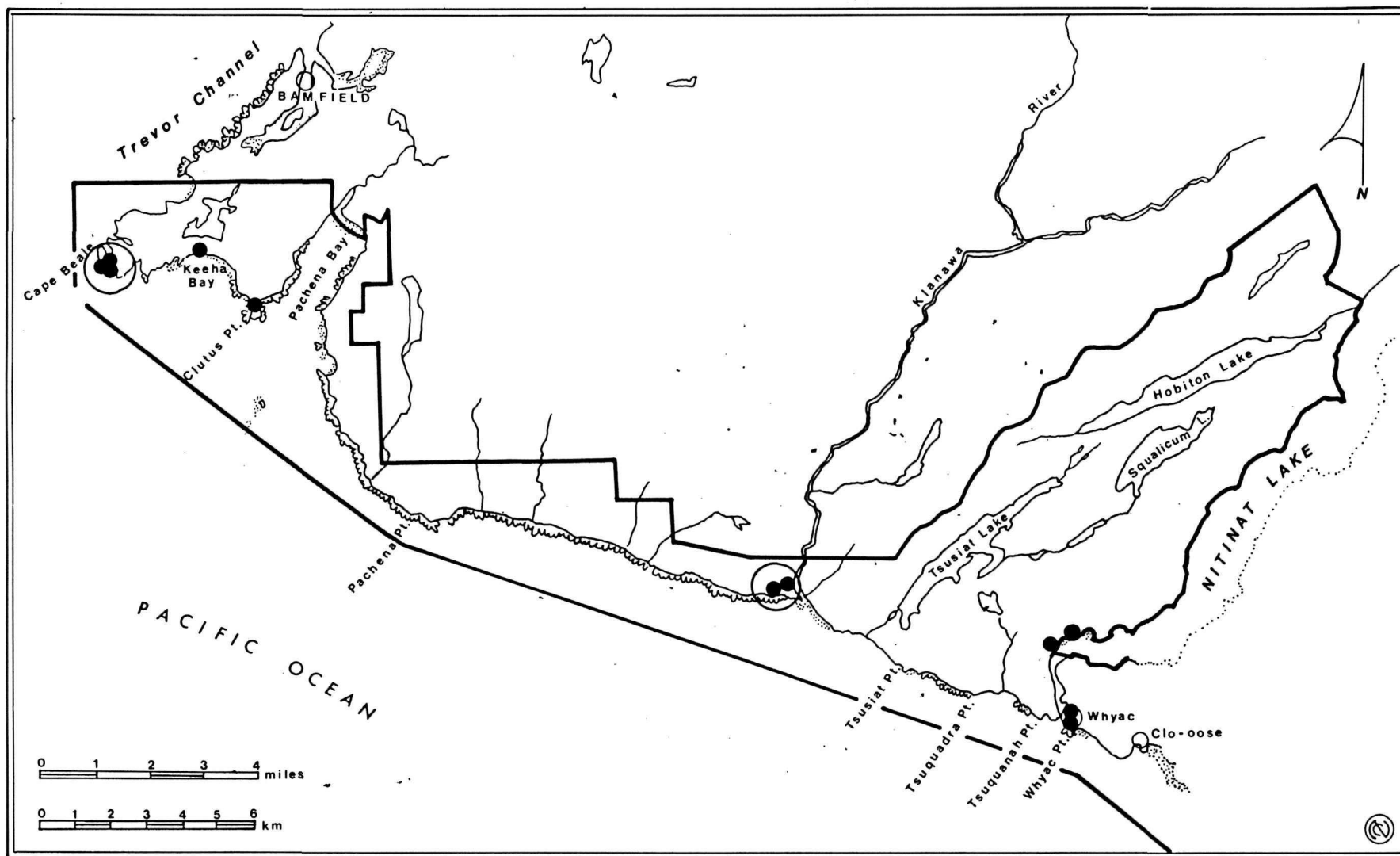


Fig. 23a. Distribution of major village sites in the West Coast Trail unit.(western section).

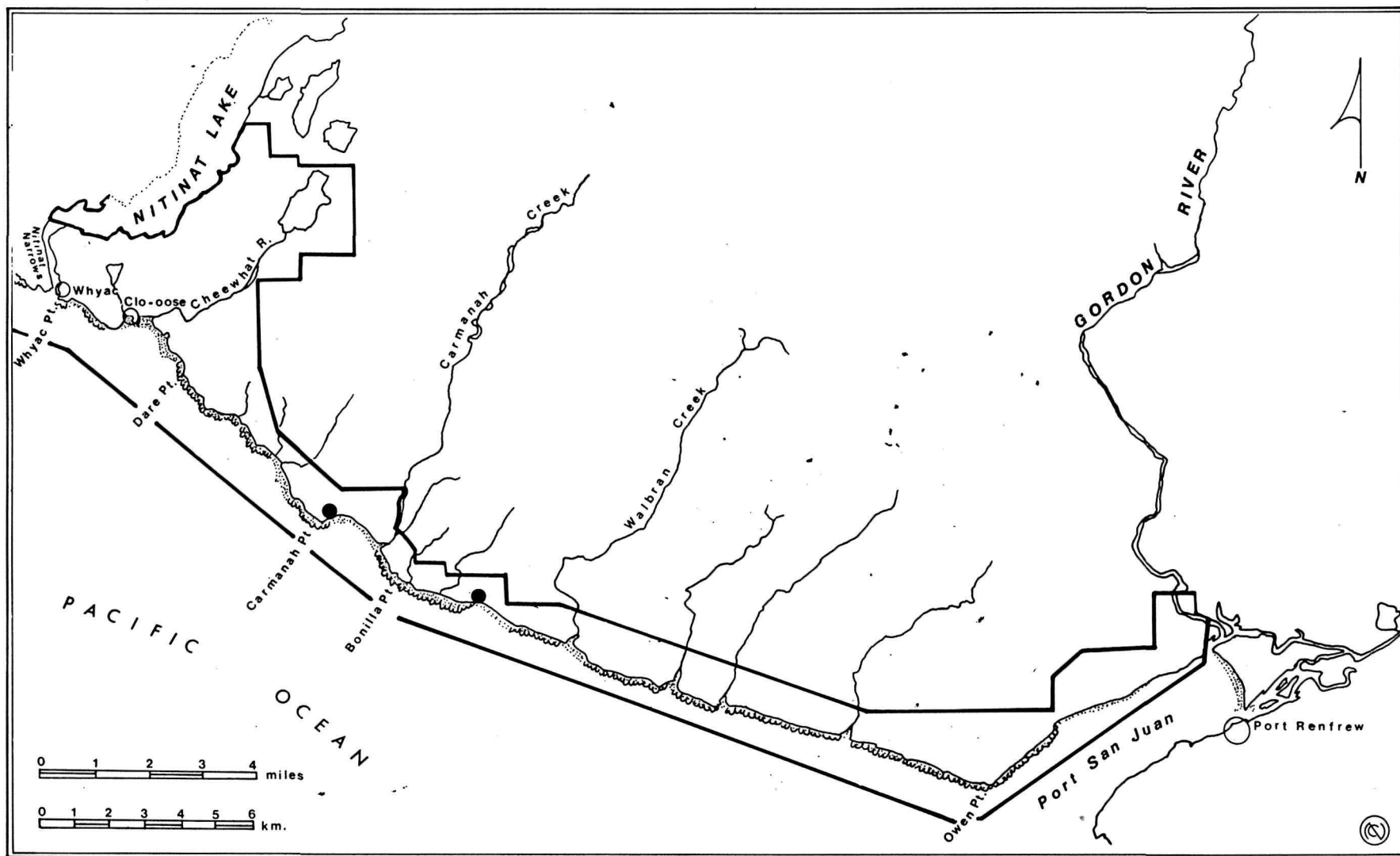


Fig. 23b. Distribution of major village sites in the West Coast Trail unit (eastern section).

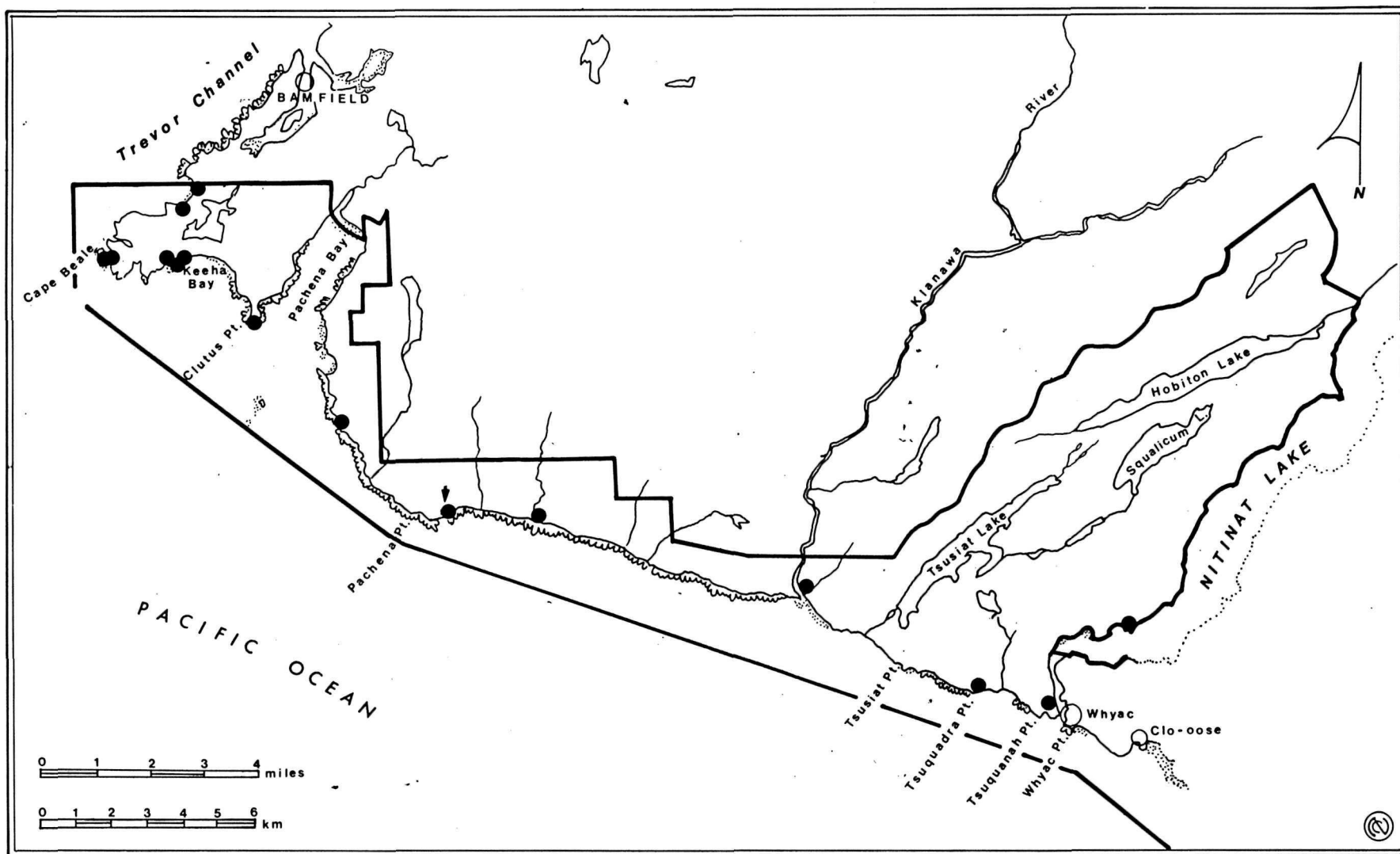


Fig. 24a. Distribution of camp sites in the West Coast Trail unit (western section).
Habitation cave indicated by ↗.

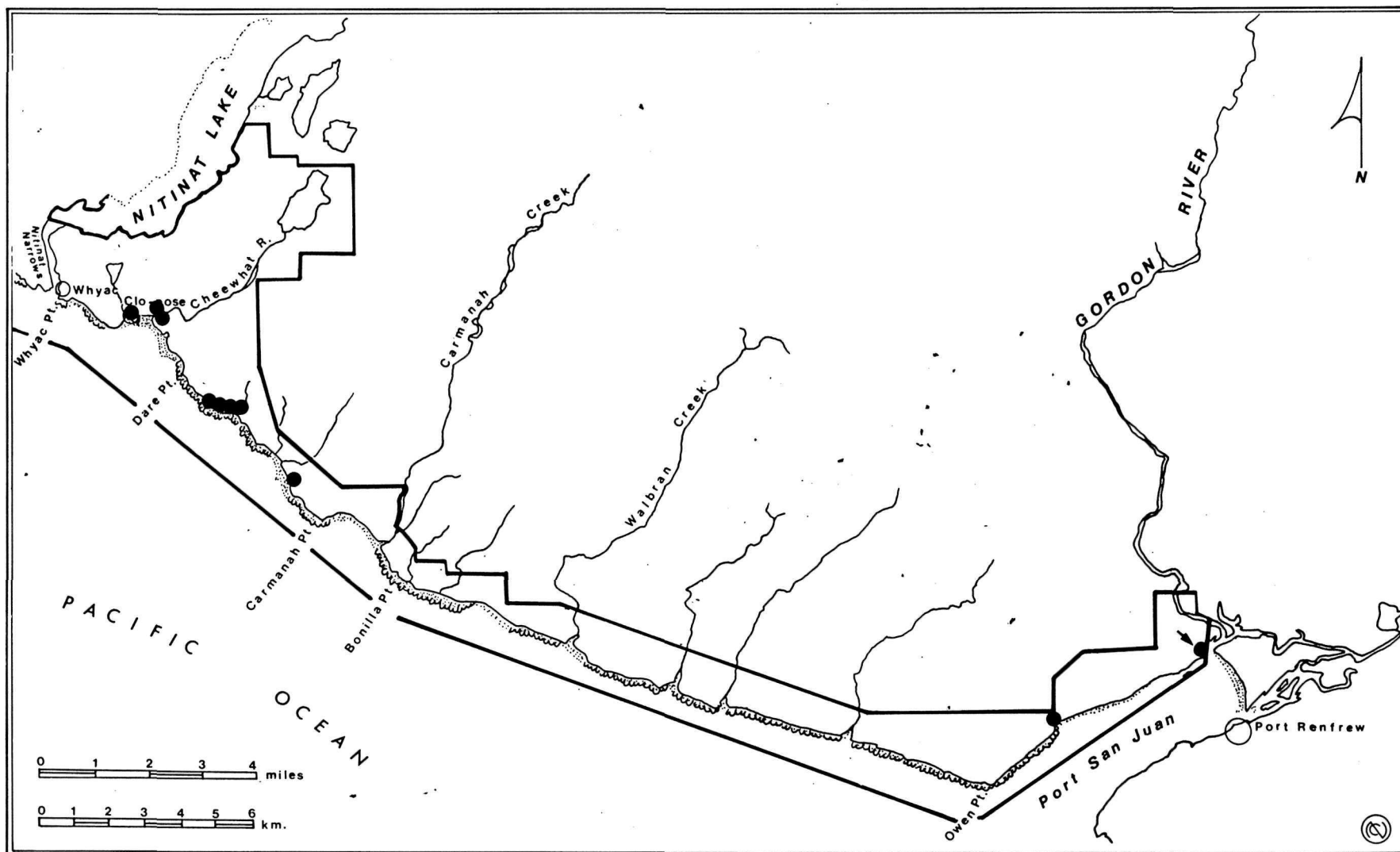


Fig. 24b. Distribution of camp sites in the West Coast Trail unit (eastern section). Habitation cave indicated by ↗ .

(Fig. 23 a,b). Almost all of the 25 camps are located on the outer coast, likely summer fishing and sea mammal hunting stations (Fig. 24 a,b).

The two habitation caves are again examples of temporary camps. One of these sites is located just east of the Pachena Point Lightstation. This cave is large and ideally situated to exploit resources along this stretch of shoreline. The west wall contains numerous figures pecked into the sandstone surface. These figures may or may not relate to the use of this cave as a seasonal camp. The other habitation cave is a smaller cave located at the head of Port San Juan.

The one defensive location (Fig. 25), at Whyac on the Nitinat Narrows, is situated in the midst of one of the heaviest site concentrations along this exposed stretch of shoreline. Its location, overlooking the mouth of the narrows, a fast-flowing, canyon-like setting, offers ample defense for the entire Nitinat Lake area.

5.3.2 Burial places

Only two of the numerous sea caves along the outer coast of the West Coast Trail unit contained evidence indicating use as a burial place. However, we did receive reports of the existence of other burial caves at Tsuquadra, Whyac and Limestone Bluffs that had collapsed sealing their contents. Both of the recorded burial places appear to date to the historic period. Again because of the sensitive nature of this site category location maps have not been included in this report.

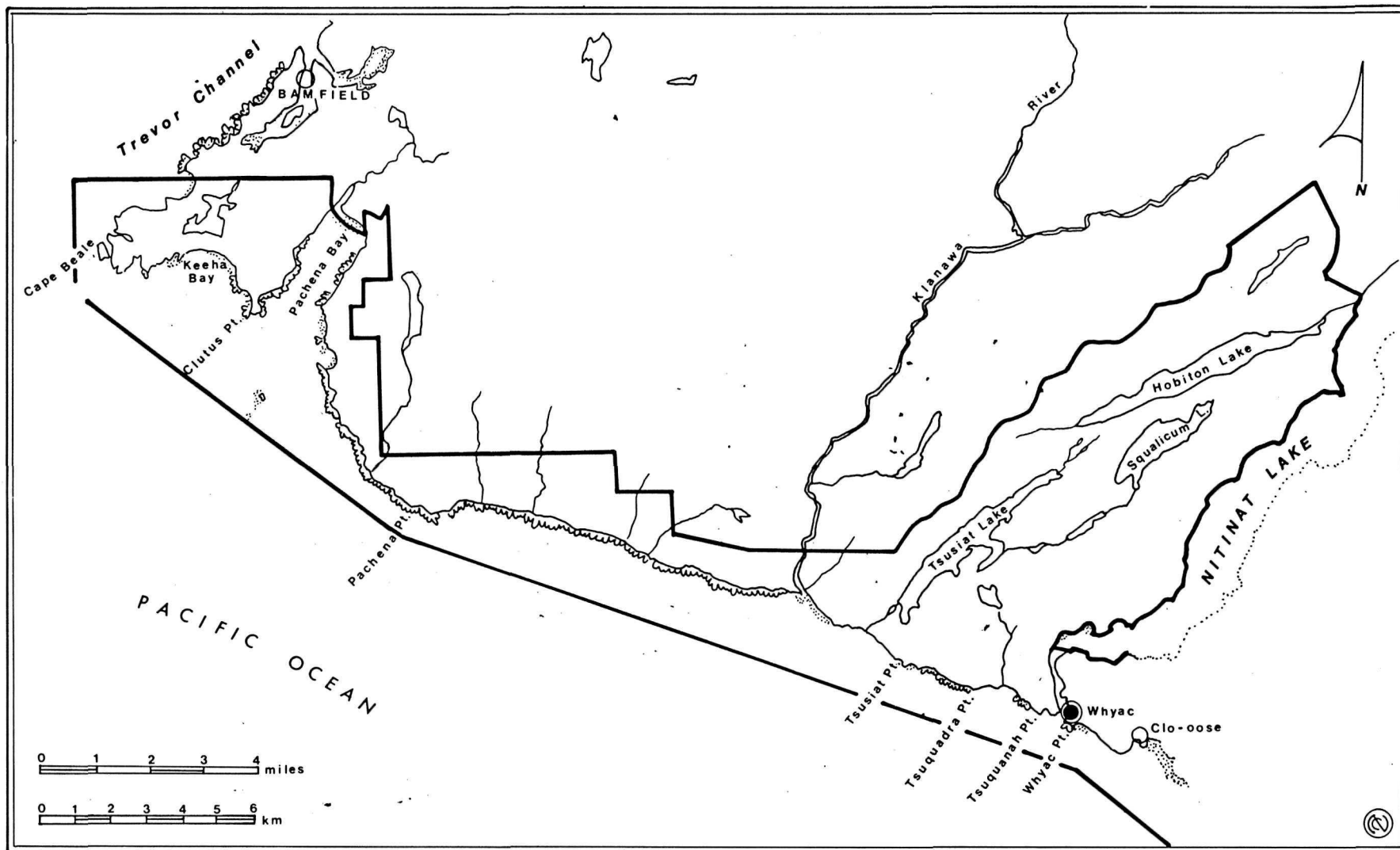


Fig. 25. Location of the defensive site in the West Coast Trail unit.

5.3.3 Rock art places

The six rock art sites (Fig. 26 a,b) known from this park unit are all petroglyph sites known from previous reports. All are located along the exposed outer coast and consist of panels with various figures represented. Two of the sites, located just east of the Pachena Point Lightstation, consist of panels on the west walls of relic sea caves, one of which also functioned as a habitation site, while the remaining four sites are located on sandstone panels in the mid to high wave toss zone. Two of these panels are located east of Dare Point while the other two are located west of Clooose.

5.3.4 Tree resource utilization areas

Twenty-seven tree resource utilization areas (Fig. 27) have been recorded within this park unit. All but five of these areas occur within the Nitinat Triangle, along the shorelines of Hobiton and Tsusiat Lakes. Only one example was found on the exposed outer shoreline, the other four being located along the shores of Nitinat Lake. All trees are Western red cedar. Examples of bark stripping dominate but there are also numerous examples of plank removal.

5.3.5 Isolated finds

One cleared trench in a cobble platform was found associated with a concentration of sites in the Cape Beale headland area (Fig. 28). This trench measures in excess of 100 m in length and consists primarily of a cleared path or deepened channel through an extensive cobble veneer, allowing easy access for watercraft to village sites in the vicinity.

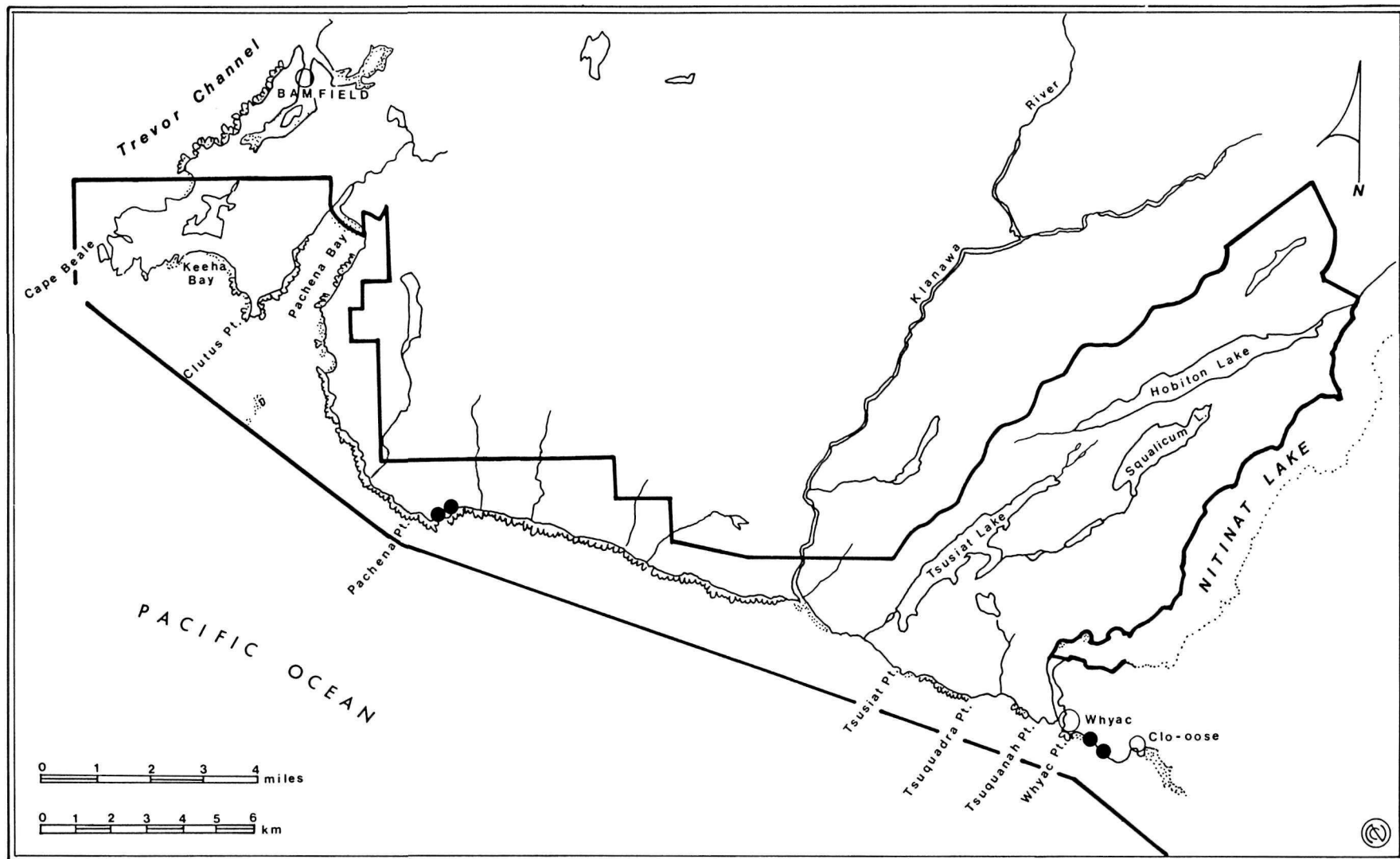


Fig. 26a. Distribution of rock art sites in the West Coast Trail unit (western section).

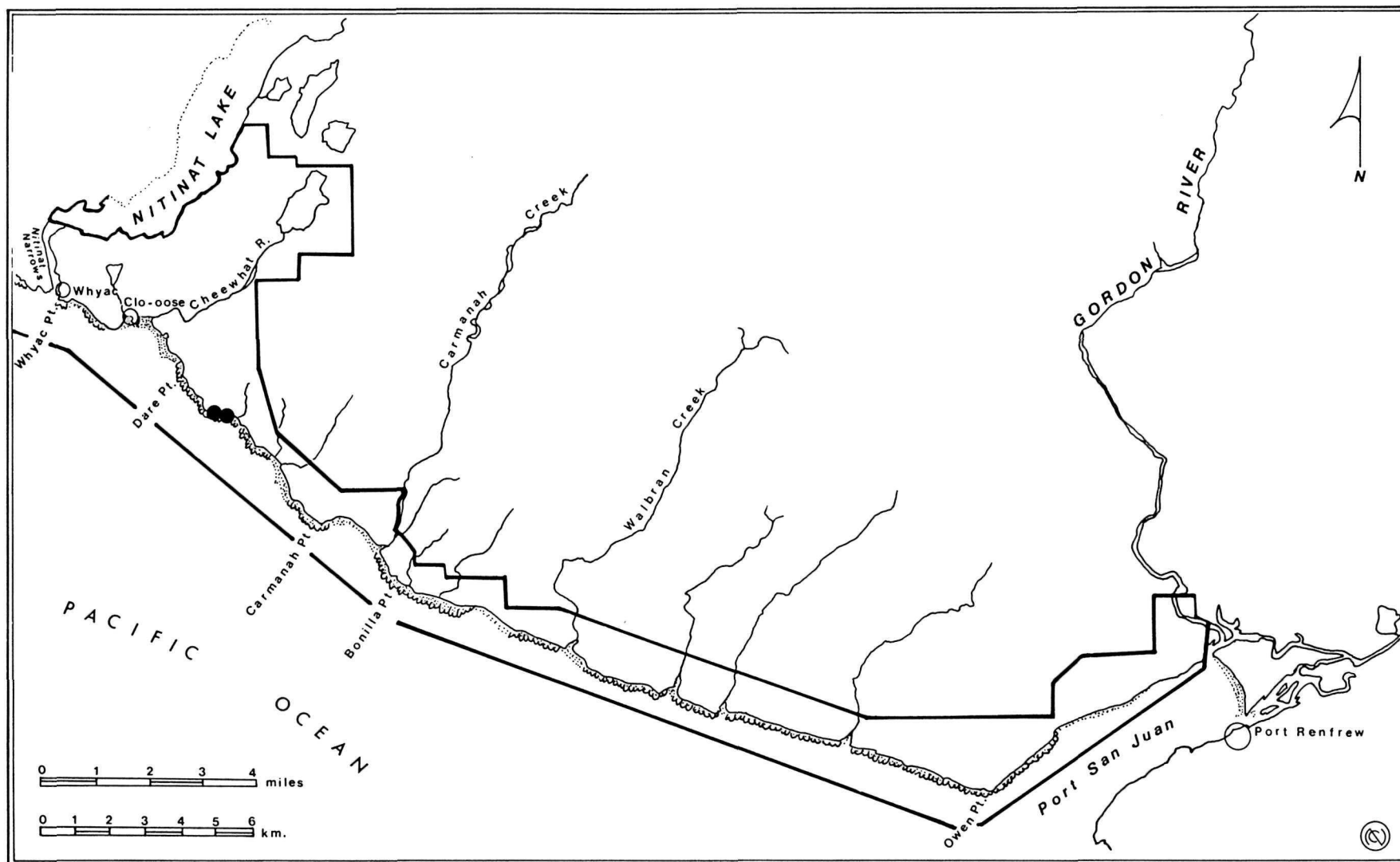


Fig. 26b. Distribution of rock art sites in the West Coast Trail unit (eastern section).

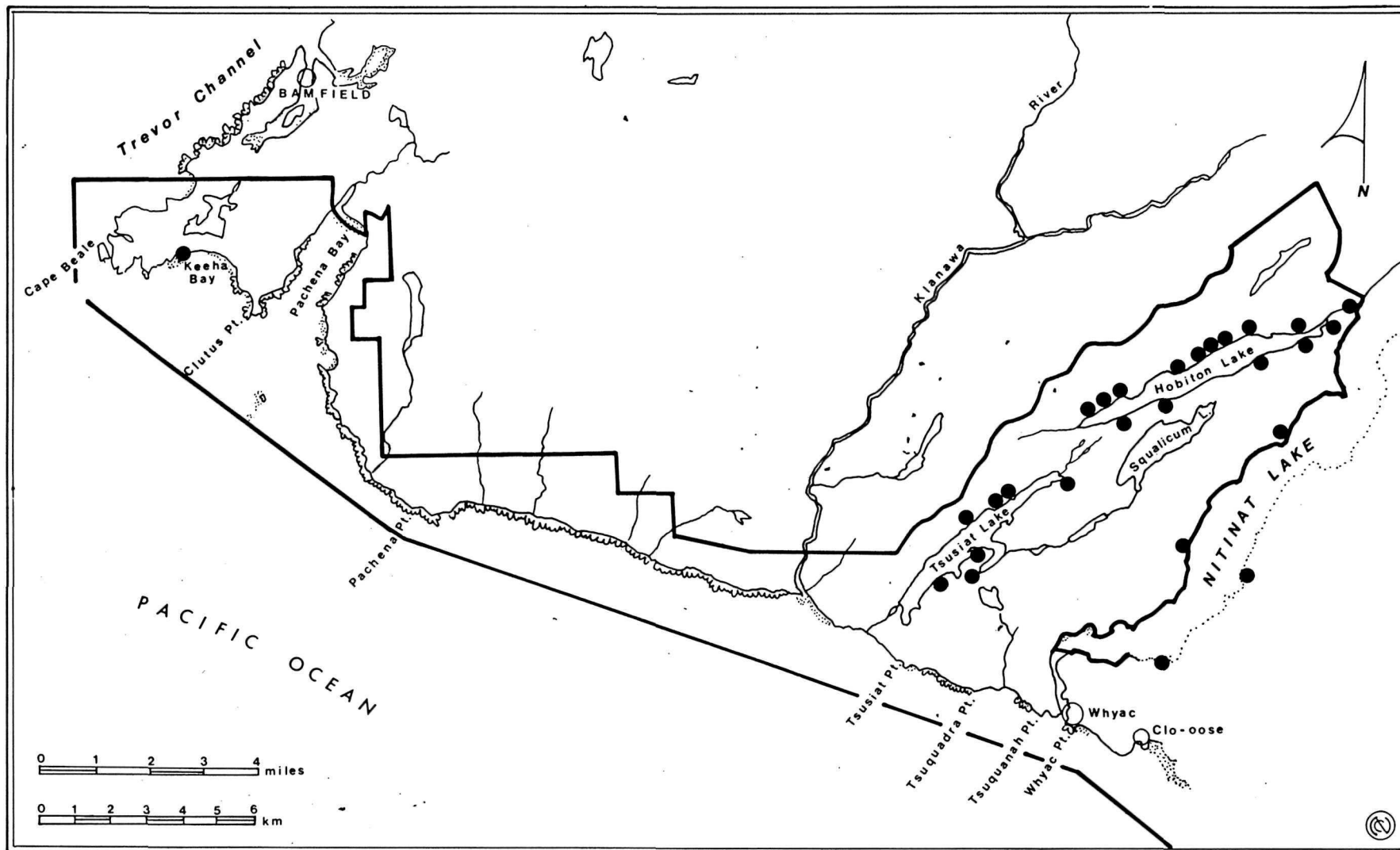


Fig. 27. Distribution of tree resource utilization areas in the West Coast Trail unit.

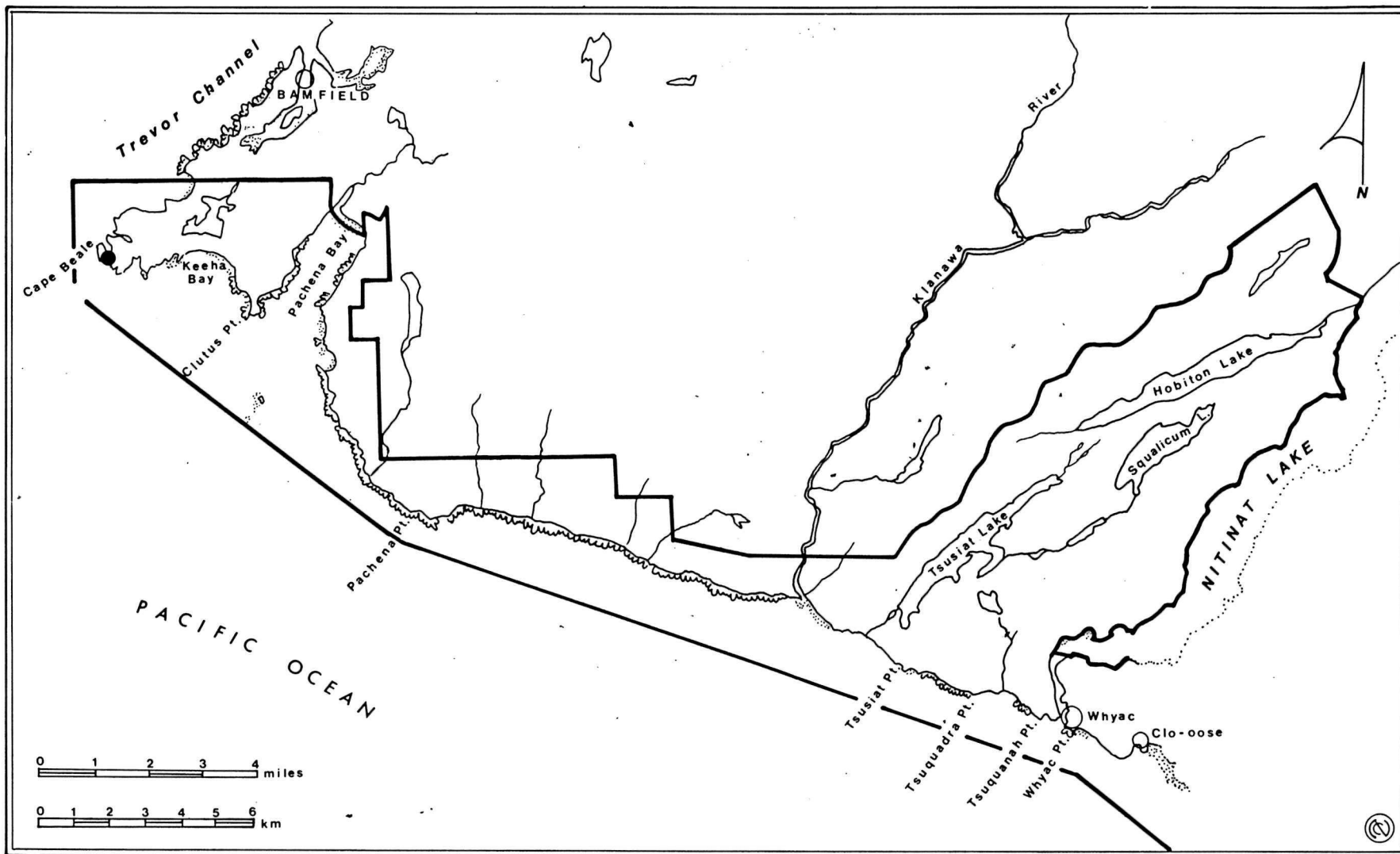


Fig. 28. Location of the isolated find in the West Coast Trial unit.

6.0 SUMMARY

The high degree of success of the field programme in all three units of Pacific Rim National Park can be attributed directly to the overall research design developed for the study, the methodology developed for both the site survey and mapping and recording phases, and, most importantly, the intensity and dedication brought to the project by the entire field crew, project personnel and volunteers alike. The results of the archaeological site survey are impressive. The percentage increase of new sites to those previously known for the Long Beach, West Coast Trail and Broken Group Islands units are 350%, 600% and 500% respectively. These figures alone force a major re-evaluation of many previously held notions regarding Nuu-chah-nulth (Nootkan) settlement and subsistence patterns, local group composition and density, population estimates and distribution and resource density and distribution, to name but a few.

The density and distribution of archaeological sites and, particularly, specific sub-types argues for high population density and extremely efficient exploitation of the entire available resource base, a base radically different from that observable today. And yet, within the three park units, there are profound differences in the density and distribution of specific site types. The classification and distribution of the 283 archaeological sites known from Pacific Rim National Park are presented by park unit, site type and sub-type in Table 6.

Table 6. Preliminary classification and distribution of archaeological sites by park unit, site type and sub-type, Pacific Rim National Park

SITE TYPE AND SUB-TYPE	PARK UNIT						PARK	
	Long Beach		Broken Group		W.C. Trail		TOTAL	
	f	%	f	%	f	%	f	%
Shell Middens								
Major Villages	6		14		13			
Camps	22		62		25			
Defensive Locations	2		2		1			
Lookout Locations	<u>4</u>		<u>2</u>		<u>-</u>			
SUB-TOTAL	34	77%	80	48%	39	52%	153	54%
Fish Traps	1	2%	39	24%	-		40	14%
Burial Places								
Cave	-		18		2			
Non-Cave	<u>-</u>		<u>3</u>		<u>-</u>			
SUB-TOTAL	-		21	13%	2	3%	23	8%
Rock Art Places	1	2%	-		6	8%	7	2%
Tree Resource Area	7	16%	18	11%	27	36%	52	18%
Isolated Finds	1	2%	6	4%	1	1%	8	3%
PARK TOTAL	44	99%	164	100%	75	100%	183	99%

It is clear from Table 6 that fish trap and burial place sites occur almost totally in the semi-protected waters of the Broken Group Islands unit whereas rock art sites (petroglyphs) occur without exception in the exposed settings of the Long Beach and West Coast Trail units. Shell midden sites, of course, occur in all park units attaining their highest relative frequency in the Long Beach unit. This is due primarily to the

high relative frequency of fish traps and burial places in the Broken Group Islands unit and of tree resource utilization areas in the West Coast Trail unit when compared with the Long Beach unit. Clearly, these differences are associated with specific macroenvironmental settings and attendant resource distribution and density within each of the park units.

Table 7 summarizes frequency and percent of site types between the three park units.

Table 7. Comparison of site types between park units, Pacific Rim National Park

SITE TYPE	PARK UNIT						PARK TOTAL	
	Long Beach		Broken Group		W.C. Trail		f	%
	f	%	f	%	f	%		
Shell Middens	34	22%	80	53%	39	25%	153	54%
Fish Traps	1	3%	39	97%	-	-	40	14%
Burial Places	-	-	21	91%	2	9%	23	8%
Rock Art Places	1	14%	-	-	6	86%	7	2%
Tree Resource Areas	7	13%	18	35%	27	53%	53	19%
Isolated Finds	1	12.5%	6	75%	1	12.5%	8	3%
PARK TOTAL	44	16%	164	58%	75	26%	283	100%

It is clear from Table 7 that the semi-protected waters of the Broken Group Islands unit offered much greater potential for settlement and subsistence than the exposed water and shoreline of the Long Beach and West Coast Trail units. In all site type categories except rock art and tree resource areas, the Broken Group Islands unit exhibits site percentages higher than the other two park units. Although these figures

do not take into account the quantity or quality of shoreline available within each park unit, there is little reason to expect any real change in this pattern when such measures are introduced.

In conclusion it should be stressed that the interpretations and site typology presented in this interim report are preliminary in nature. The use or function of sites and the number of social units operating on the landscape have been inferred from the archaeological data base and macroenvironmental parameters alone. Further analysis of the results of the archaeological survey and integration with the extant ethnographic, historic and environmental data sets will be presented in the final report.

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