

THE BELCARRA PARK SITE

Introduction

Belcarra Bay is situated twelve miles to the south of the Coast Mountains. It is rough, mountainous land of granitic rock types which are exposed at or near the surface. In many places this bedrock is overlain by till, outwash, sand,

gravel and silt of glacial and interglacial origins (Armstrong, 1957:Map 16). These deposits are in evidence at the southern extremity of the Belcarra Park site (DhRr 6), which is a large midden situated on the eastern shore of a



Fig. 2. Aerial photograph of the Belcarra Park site (DhRr 6).

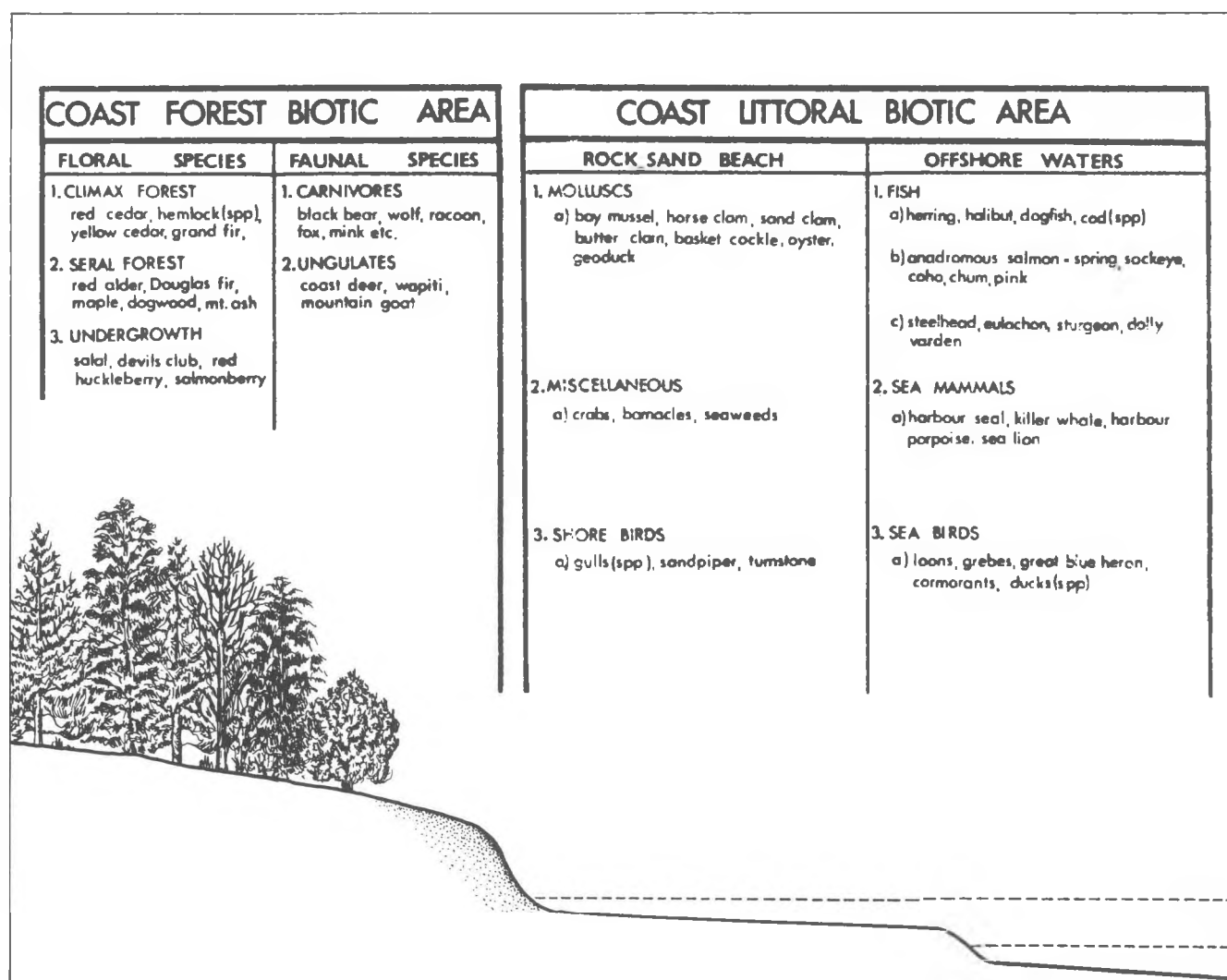


Fig. 3. The Belcarra Park site in relation to the Coast Forest and Coast Littoral Biotic Areas.

well protected body of water (Indian Arm) at longitude 122° 55'25" W and latitude 49° 18'48" N (Fig. 4). Indian Arm, a glacially deepened fiord, is the northern extension of Burrard Inlet. To date 22 archaeological sites have been recorded for the Burrard Inlet-Indian Arm locality. This includes 13 habitation sites as well as nine pictograph sites. While Belcarra Park is the only site in this locality which has been intensely excavated, six other sites have been briefly tested. These include Strathcona (DhRr 18), Pigeon Cove (DhRr 9), Noons Creek (DhRq 1), Caraholly (DhRr 17), Barnet Highway (DhRr 10) and Cates Park (DhRr 8).

The Belcarra Park site, like many other coastal middens is located on the border of two major biotic zones; in this case the Coast Forest Biotic Area and the Coast Littoral Biotic Area. The latter area includes an intertidal zone as

well as the offshore waters. The significance of this location is summarized in Figure 3.

An outline of the physiography of the area is provided by Bostock (1948) and Holland (1964) while the climate of the area is detailed in Chapman and Turner (1956), Kendrew and Kerr (1955), Kerr (1951) and Stager and Wallis (1968).

Site Description

The Belcarra Park site presently measures 150 metres (north-south) by 40 metres (east-west). The site may have been slightly larger at one time as road construction has bisected the site at the northern boundary (Fig. 2 and 5), although close examination of the northern road exposure showed no cultural deposits. Other destruction at the site includes the construction of three buildings on

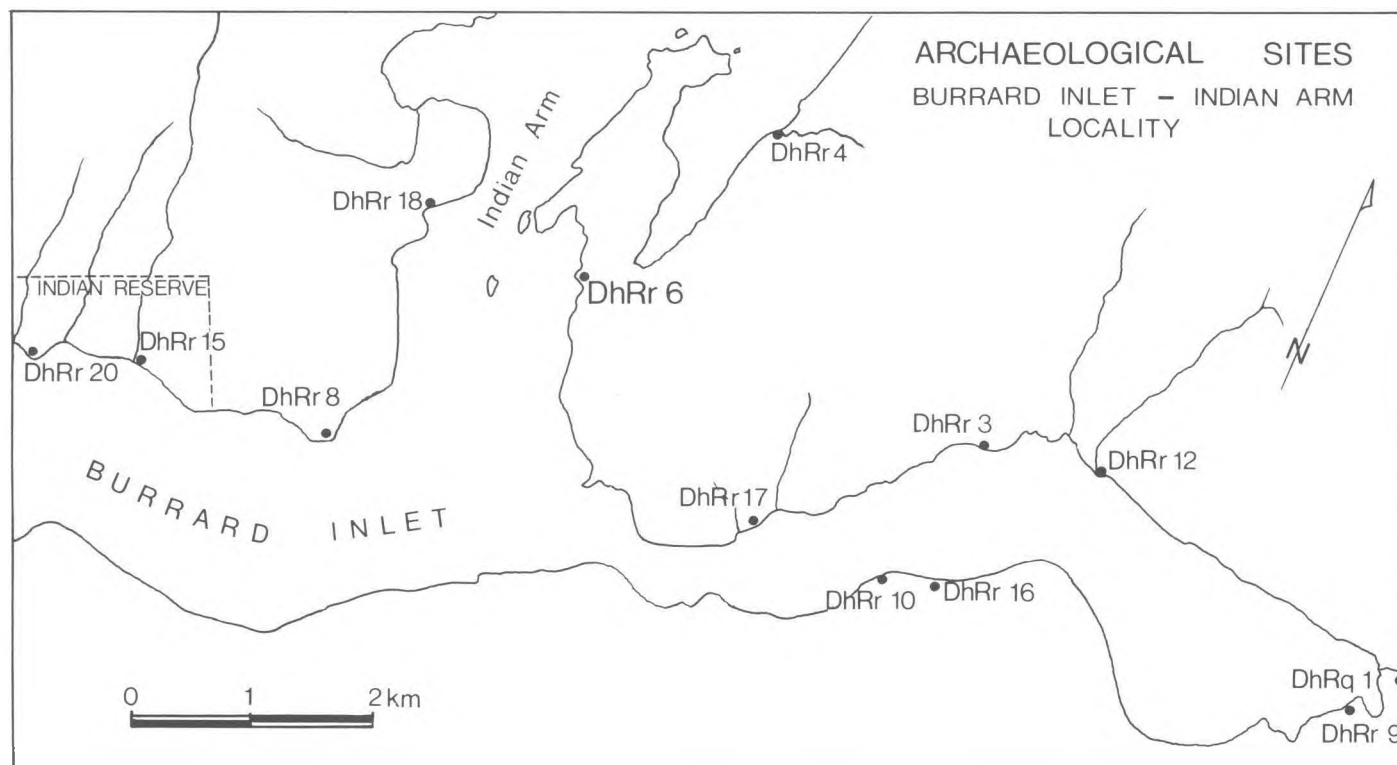


Fig. 4. Archaeological sites: Burrard Inlet-Indian Arm locality.

the western boundary of the midden and wave erosion along the western edge. Some residents claim that as much as half an acre has eroded from the western face of the midden within the last fifty years.

The existence of the Belcarra Park site has been known to professional archaeologists, local residents and relic collectors for a number of years. The park had always been in the hands of private owners and until 1971 proposals for excavations were always denied. In the spring of 1971 Belcarra Park was purchased by the Vancouver-Fraser Regional Parks Authority (now part of the Greater Vancouver Regional District). Application for controlled archaeological investigations was made to the Authority in May of 1971 and permission was granted shortly thereafter.

Excavation Units

Restrictions imposed by Park officials limited the excavations to the extreme northwest section of the Belcarra Park midden. A datum point was established at the northeast corner of the concrete sidewalk (Fig. 5), and an arbitrary north/south base line traversed the datum point. Primary horizontal excavation units were 2 metre by 2 metre squares. Vertical excavation units of 10 centimetres were used with the exception of Excavation Unit 1

which was excavated utilizing natural stratigraphic levels. Excavation Units 1 – 10 were excavated during June, July and August, of 1971 while Excavation Units 11 – 14 were excavated during October, 1971.

Approximately 108 cubic metres of midden was excavated from the 15 excavation units. Soil samples, carbon samples, one burial plus numerous features and 1,306 catalogued artifacts were recorded during the excavations. Typical profiles are shown in Figures 6, 7 and 8.

Physical Stratigraphy

The oldest geologic deposits at the site are granitic and associated rock types (hornblende-quartz diorite, biotite) formed in pre-Tertiary times. The bedrock is commonly mantled by thin layers of glacial, glaciomarine and raised marine shore deposits consisting of tills, outwash, sands, gravels and silts (Armstrong 1957:Map 16).

The surficial geologic deposits (Zone A) at the Belcarra Park site consist of:

- a) Yellow and red/brown glaciomarine clays and brown sandy till of glacial origin which date to the Vashon Stade (ca. 19,000–13,000 B.P.) of the last major (Fraser) glaciation.

These deposits were observed in all excavation units and in Excavation Units 11–14, the cultural deposits lie directly on these clays and tills.

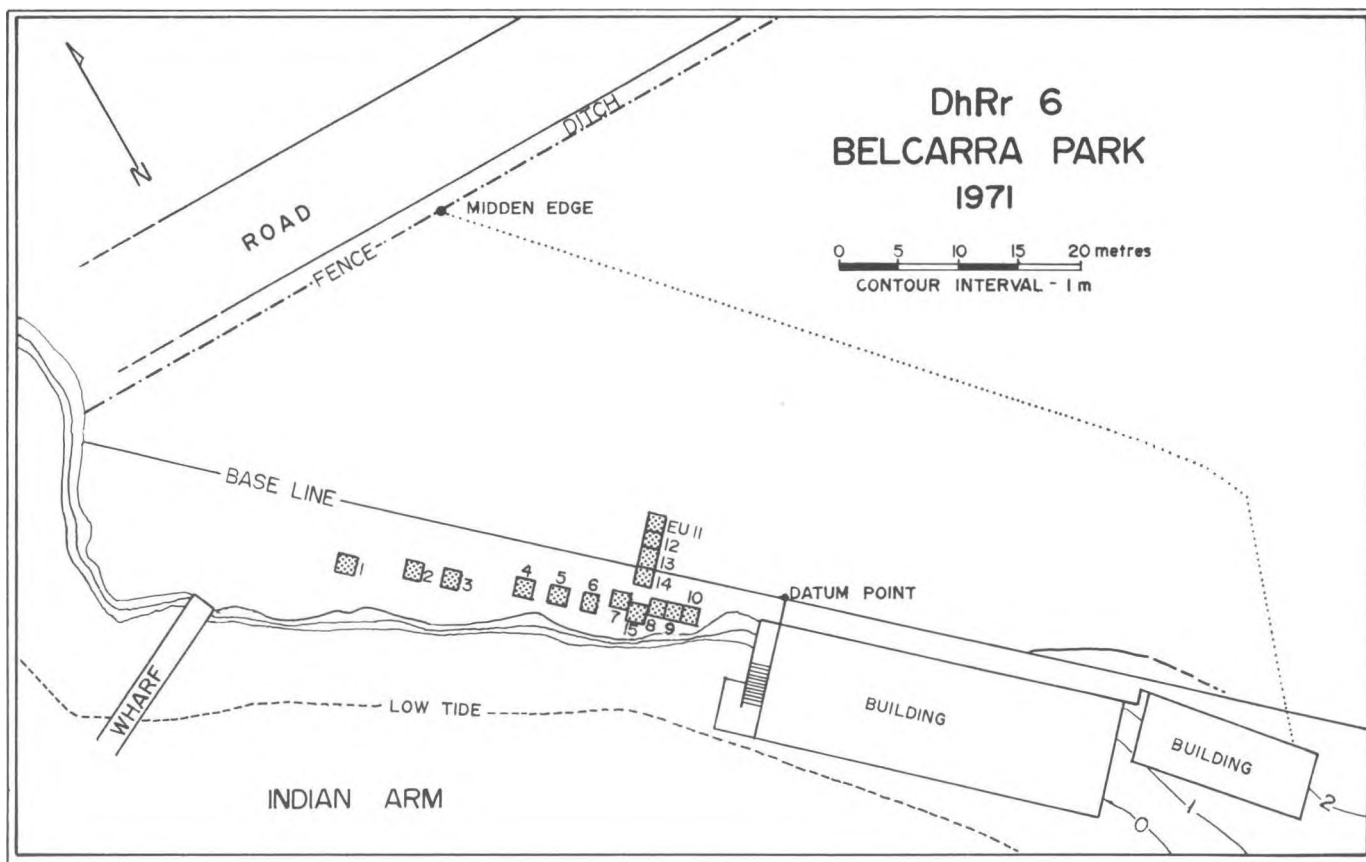


Fig. 5. The Belcarra Park site showing location of excavation units.

- b) The above deposits were overlain by brown beach gravels in Excavation Units 1–10 and 15. These gravels (Bose) are raised marine shore deposits (wave washed lag gravels) which date to the Everson Interstade (ca. 13,000–11,000 B.P.).

From an examination of all excavation units, the midden can clearly be divided into two major stratigraphic units. Zone B (Fig. 6) consists of a black compact soil which contains highly fragmented charcoal and much fire-cracked rock. Minute amounts of shell and very little bone and antler were observed. When present the bone and antler was poorly preserved. The thickness of Zone B deposits varies between 16.8 and 82.0 centimetres with a mean thickness of 33.7 cm. Zone B deposits were noted only in Excavation Units 1–10, 14, 15 and the western half of Excavation Unit 13 (i.e. the western or beachward portion of the midden). Zone B deposits reach a maximum thickness (82.0 cm) in Excavation Unit 5. Zone C overlies Zone B and differs from Zone B in that it contains a great deal of faunal material (bird, land mammal, sea mammal and fish) which is generally well preserved. Great quantities of shell-

fish species (blue mussel, butter clam, cockle) are also characteristic of Zone C. Zone C is typical of many coastal British Columbia middens in that it contains a complex mixture of shell layers, lenses of multi-coloured ash and layers of humic soil, charcoal and fire-cracked rock. To further facilitate description, Zone C has been divided into the following categories (Fig. 8):

Zone C1 – a zone of black soil matrix containing sparse to moderate amounts of fragmented blue mussel, butter clam and basket cockle shell. This stratum appears consistently in all excavation units and varies in thickness from 12.0–59.0 cm with a mean thickness of 33.0 cm.

Zone C2 – a zone which consists primarily of crushed blue mussel shell. Moderate amounts of fragmented butter clam and basket cockle shell were also noted. This zone appeared consistently in all excavation units and was often interspersed with Zone C1. Zone C2 averaged 23.0 cm in thickness and ranged from 8.0 – 48.0 cm.

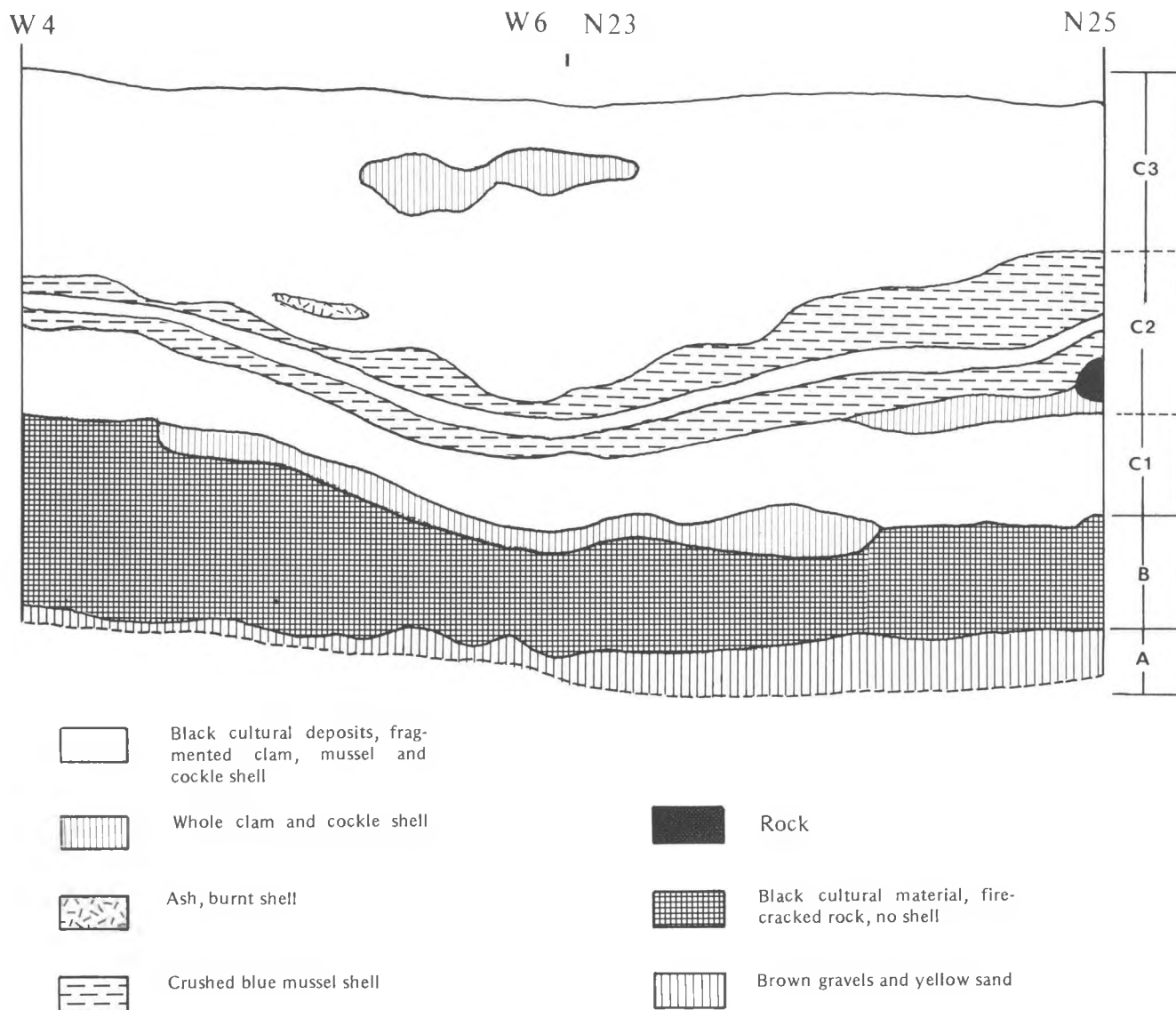


Fig. 6. Stratigraphic Profile: DhRr 6, Excavation Unit 4, north and east walls.

Zone C3 — this zone consists of whole and/or large pieces of butter clam and basket cockle shell. Excavation Units 1–4 contained deposits of Zone C3 which ranged between 8.0–22.0 cm in thickness and averaged 13.0 cm. All other excavation units yielded isolated lenses of loose shell rather than complete strata.

Zone C4 — this zone is a black humus layer which contains little or no shell. Lenses of charcoal, fire-cracked rock, ash and sand lenses, and historic disturbances are also common in this zone. This zone is the uppermost zone at the Belcarra Park site and averages 30.0 cm in thickness with a range of 21.0–48.0 cm in thickness.

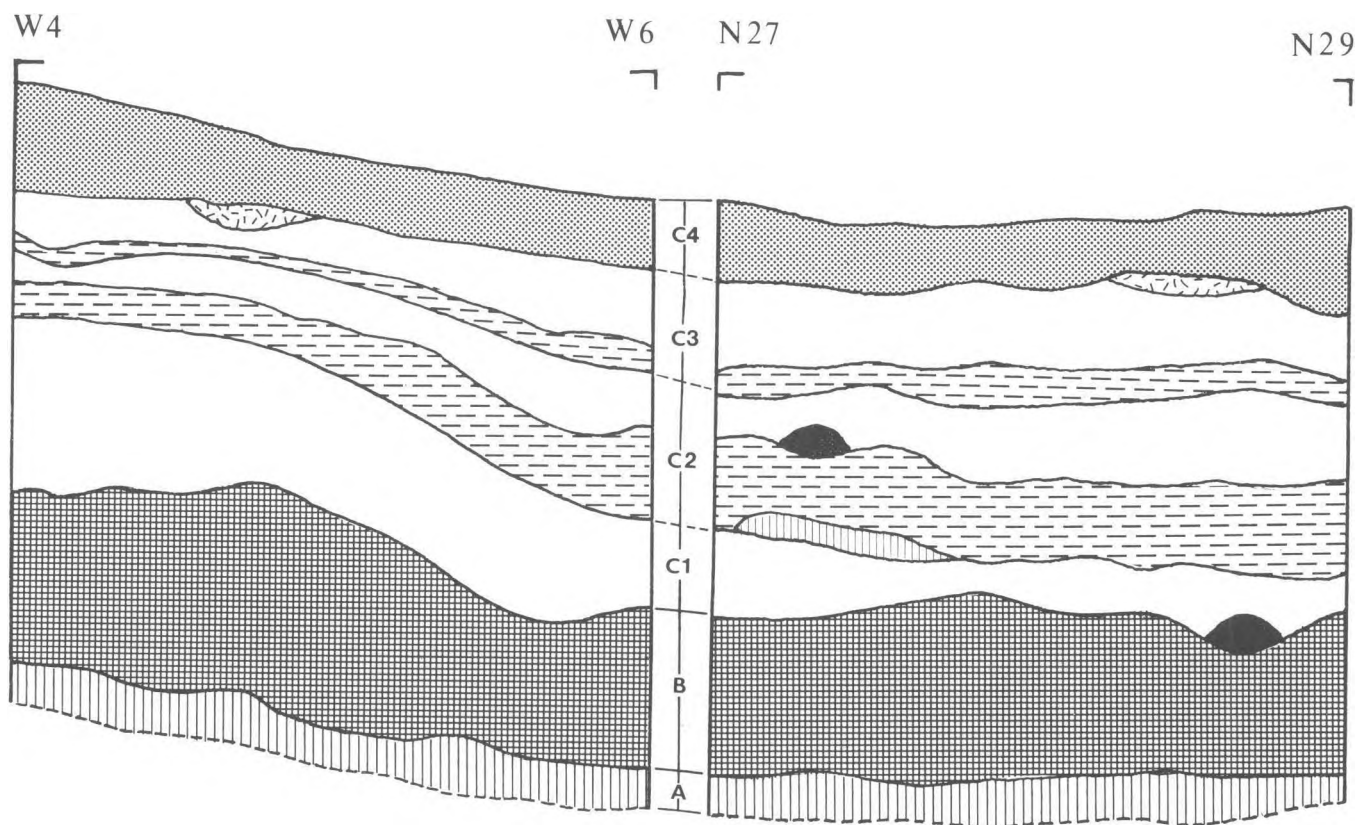
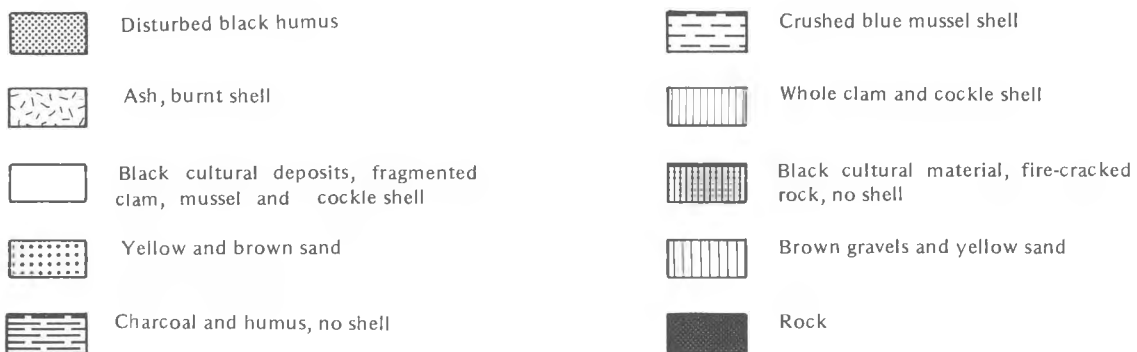


Fig. 7. Stratigraphic Profile: DhRr 6, Excavation Unit 5, north and east walls.



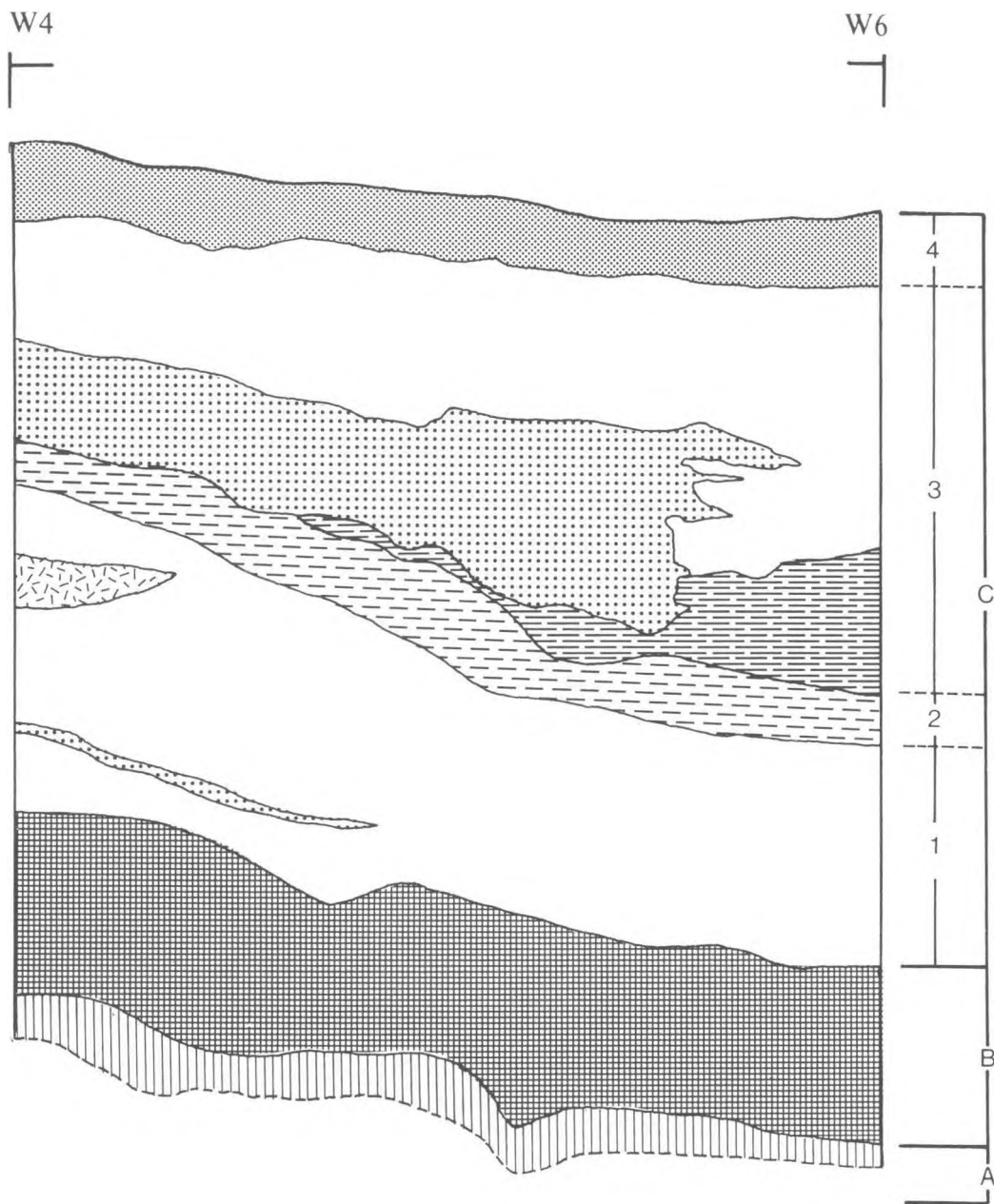


Fig. 8. Stratigraphic Profile: DhRr 6, Excavation Unit 6, north wall. See Figure 7 for key.