

MOVING SANDS

ARCHAEOLOGY IN THE DUNES

Facts

- Maori were generally coastally oriented
- Kai moana (fish, shellfish) was very important
- Dunes contain a record of 800 years of human occupation
- Archaeological sites are a non-renewable resource

- Archaeological sites in the dunes have been under threat for the last 50 or more years
 - Coastal subdivision and increased visitor access
 - Erosion through wave action and sand deflation
 - Sea level rise

Dune sites

- Most Maori sites in dunes are middens (rubbish heaps) which may contain
 - Shell
 - Bone from fish and mammals
 - Features where food was cooked
 - Evidence of food preservation
 - Evidence of postholes of structures
- Short or long term occupation
- Places where people were buried

NOT ALL DUNE SITES ARE THE SAME

- Each is important because it was laid down at different times by year and season
- Contains unique information based on age and landscape setting and how they can be interpreted in terms of human behaviour

Case studies

- Cross Creek, Sarah's Gully
- Opito
- Whitipirorua, Onemana
- Opoutere
- Great Mercury Island

- CROSS CREEK
(Sarah's Gully)

- 1983/1988/2008



CROSS CREEK, SARAHS GULLY



- Late 1200s-early 1300s L9
 - Mid 1300s L7
 - Late 1300s-early 1400s L5
 - Late 1400s L3
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- Cooking areas
 - Shell fishhook manufacture
 - *Cellana denticulata*
 - Moa, sea mammal (seal, sea lion, sea elephant)

Opito – T10/164



- 2 layers
- 1400s and early 1500s





- 17m² excavated
- 100 kg shell
- 50 kg basalt flakes
- 132 snapper
- 190 leatherjacket



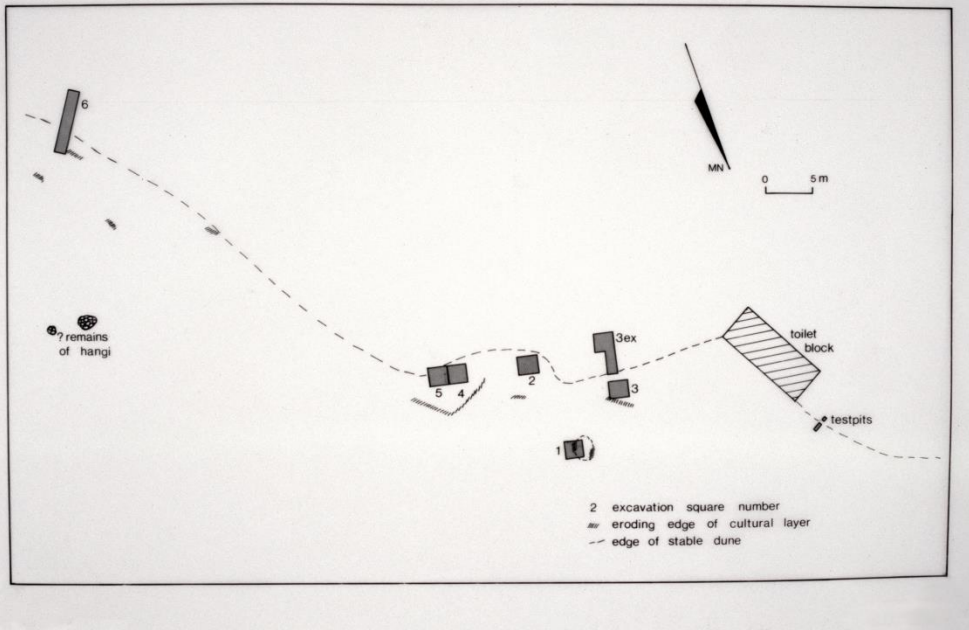


- Whitipirorua (Onemana)





- 1325-1415 (L8)
- 1425-1495 (L2)





Opoutere

- 10 layers
- 1300s-late 1700s





Tairua

- Later 1300s-early 1400s



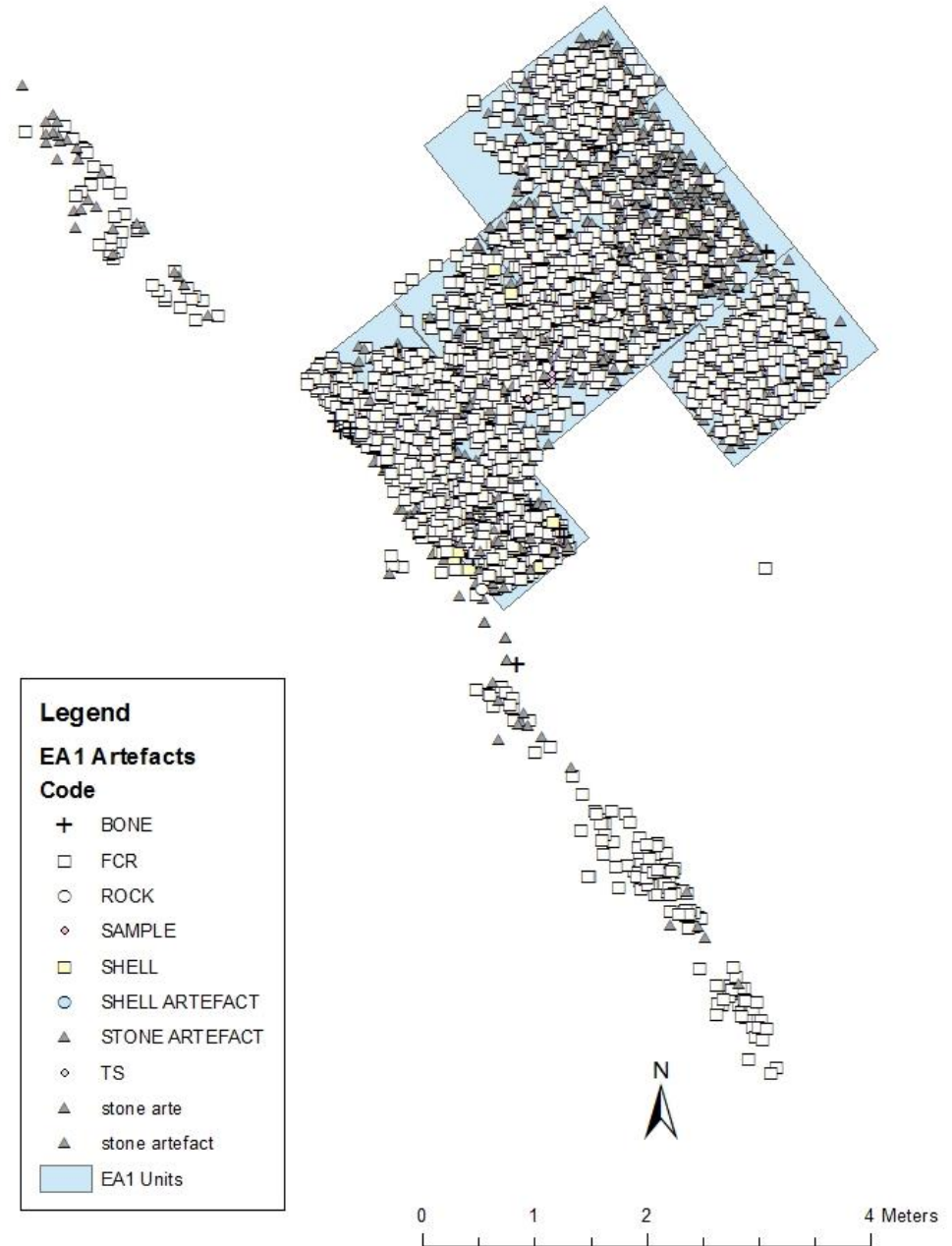


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Data SIO, NOAA, U.S. Navy, NGA, GEBCO



EA1

- Late 1400s
- Cooking area
- Basalt working area
- Whale, dog, seal bone









SEA LEVEL RISE

- 0.16/100 yrs over last century
- 0.9/100 yrs over next century
- El Nino (westerly)/La Nina (easterly)
- Severe erosion/site damage 1950-1976

Monitoring

- Baseline survey 1982
- Resurvey 2007

	1982	2007
Recorded sites	127	
Sites relocated		52
Destroyed		71
Not visible		4
New sites recorded		17

Sites dated 1300-1500 (records from 1959)

Sites destroyed	14	41%
Sites probably destroyed	5	15%
Sites present but mostly destroyed	8	23%
Sites eroding/damaged but significant amount remaining	5	15%
No known site at locality, assumed destroyed	2	6%