

Kau Point Kina Transects 2nd & 3rd April 2022

50m Transect 02 April 2022

Two divers each counting kina 1m either side along a 50m transect. Transect was tied off at the shallow marker and run north along the rocky reef and in front of the KinaKam, then east of the larger rocks and across the shallow area. Depth about 2.7m to 1.6m to 3m.

Data collected includes photos of the 30x30 cm quadrant every 5m, video, photos, GPS track.

02 April 22	50m Transect		
Transect section	Kina # (1m west)	Kina # (1m east)	In section
50-45m	5	0	5
45-40m	56	3	59
40-35m	12	17	29
35-30m	9	9	18
30-25m	19	56	75
50-25m:			186
25-20m	16	7	23
20-15m	38	24	62
15-10m	11	13	24
10-5m	7	23	30
5-0m	44	9	53
25-0m:			192
50-0m:	Kina (100m²)		378

Table: Kina counts along the 50m transect from shallow marker (02 April 2022).

Notes:

- Kina are very dense in some patches of kelp
- Section highlighted in red with kina numbers over 50 per 10m²



Map: GPS tracked transects on 2 & 3 April 2022.



Kau Bay Point, 02-04-2022, 0m (1)



Kau Bay Point, 02-04-2022, 0m (2)



Kau Bay Point, 02-04-2022, 5m (1)



Kau Bay Point, 02-04-2022, 5m (2)



Kau Bay Point, 02-04-2022, 10m (1)



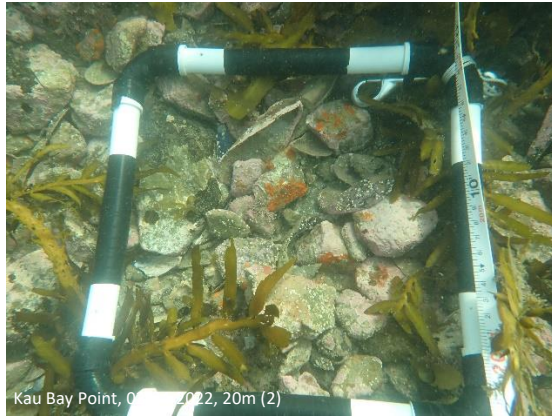
Kau Bay Point, 02-04-2022, 10m (2)



Kau Bay Point, 02-04-2022, 15m (1)



Kau Bay Point, 02-04-2022 20m (1)



Kau Bay Point, 02-04-2022, 20m (2)



Kau Bay Point, 02-04-2022 25m (1)



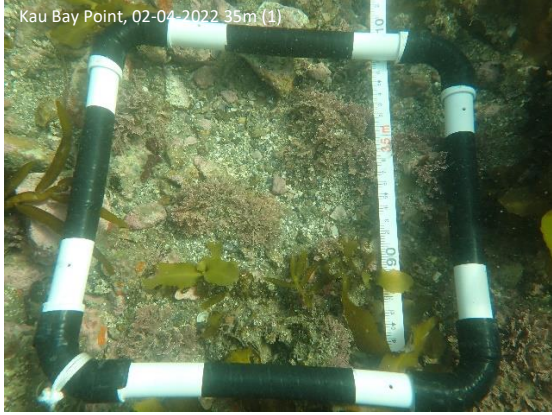
Kau Bay Point, 02-04-2022, 25m (2)



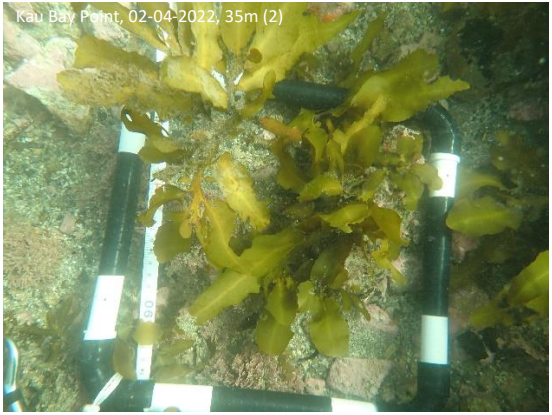
Kau Bay Point, 02-04-2022 30m (1)



Kau Bay Point, 02-04-2022, 30m (2)



Kau Bay Point, 02-04-2022 35m (1)



Kau Bay Point, 02-04-2022, 35m (2)



Kau Bay Point, 02-04-2022 40m (1)



Kau Bay Point, 02-04-2022, 40m (2)



Kau Bay Point, 02-04-2022 45m (1)



Kau Bay Point, 02-04-2022 50m (1)



Kau Bay Point, 02-04-2022, 50m (2)

25m Transects 03 April 2022

Two divers counted kina along two 25m transects (count 1m either side).
Location: see map above

2022-04-03	Transect 1	Depth
25-20m	55	5.1
20-15m	37	4.6
15-10m	35	4.3
10-5m	164	3.7
5-0m	30	3.1
Kina (50m²)	321	(1.9-5.1m)

2022-04-03	Transect 2	Depth
25-20m	22	5.6
20-15m	54	5.0
15-10m	18	4.6
10-5m	162	3.5
5-0m	3	
Kina (50m²)	259	(2.4-5.6m)

Note: Weed line at about 7.5m in 3.4m depth

Transect 1





Kau Bay Point, 03-04-2022 T1 20m



Kau Bay Point, 03-04-2022 T1 25m

Transect 2



Kau Bay Point, 03-04-2022 T2 0m



Kau Bay Point, 03-04-2022 T2 5m



Kau Bay Point, 03-04-2022 T2 10m



Kau Bay Point, 03-04-2022 T2 15m



Kau Bay Point, 03-04-2022 T2 20m



Kau Bay Point, 03-04-2022 T2 25m

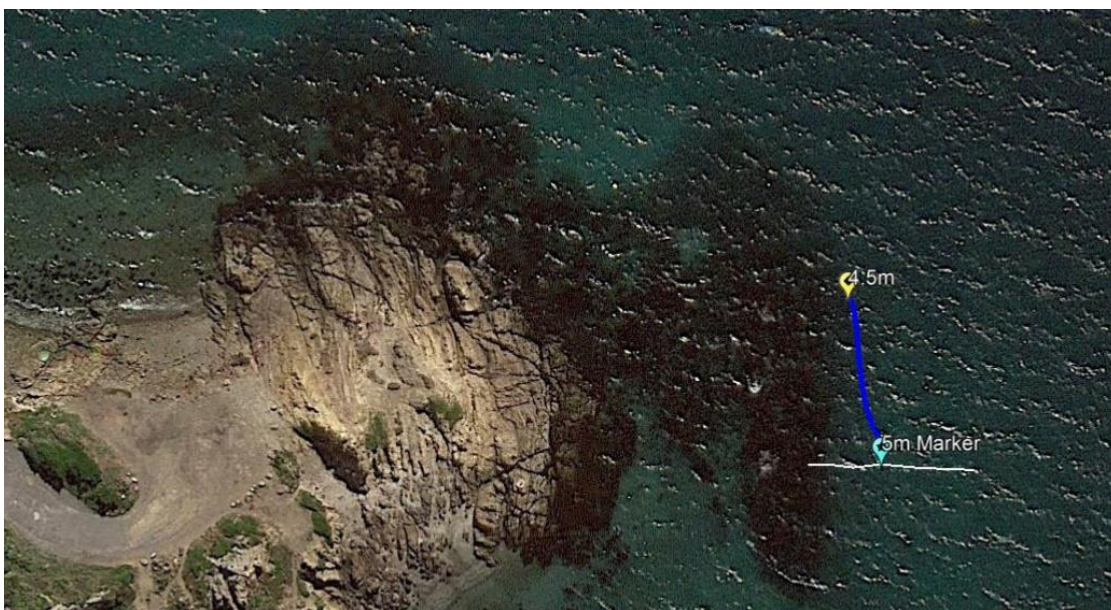


Comparison March 2021 to April 2022

Transect 2 on 3 April 2022 crossed the fixed transect marker installed on 1 March 2021. In March 2021 the marker was at the edge of a thick kelp forest and divers were diving along the weed line. The transect from 3 April cuts perpendicular across the transect from 2021.

The comparison of video data from both dives shows an estimated loss of a 5m wide band of thick kelp forest to kina grazing over 12 months. The remaining kelp is already a lot thinner than a year earlier and a dens kina grazing front is continuing to work its way shallow. There's only a fringe of another 5-7m left.

Video comparison: <https://vimeo.com/695363261/2e5ddc2140>

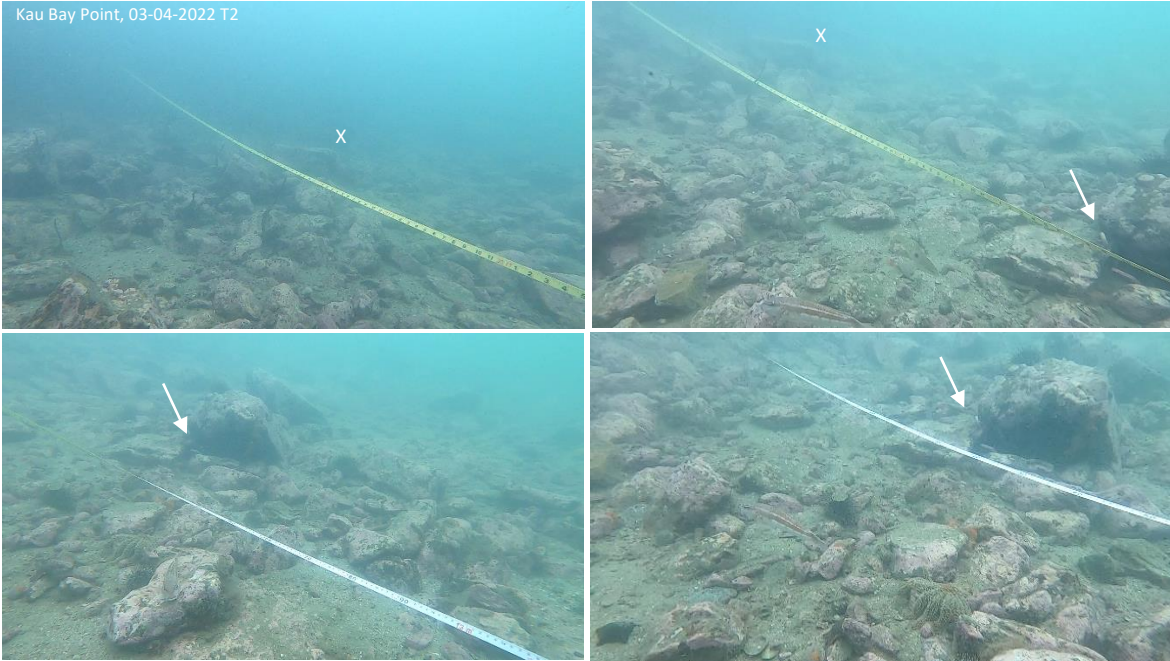


Map: Blue GPS-tracked dive 1 Mar 2021, white T2 from 3 April 2022



Map: Purple GPS-tracked video dive 4 Aug 2019, white T2 from 3 April 2022

Kau Bay Point, 03-04-2022 T2



Kau Bay Point, 01-02-2021, placing the 5m marker

