

CAULERPA - TIMELINE OF EVENTS	
June 2021	Caulerpa identified by Jack Warden in Okupu/Blind Bay, Aotea Great Barrier: <a href="Maturalist"><u>iNaturalist</u></a> .
September 2021	Controlled Area Notice (CAN) imposed by Biosecurity NZ on Blind Bay and Tryphena harbour (20 September) and later extended to Whangaparapara Harbour.
	Rāhui imposed over three harbours by Mana Whenua.
	<i>'Killer algae'</i> by Kate Evans for New Zealand Geographic ( <u>Issue 177 Sep/Oct 2022</u> ).
December 2021	Caulerpa detected in Western Bays of Aotea Great Barrier. Aotea Great Barrier Environmental News article by Barry Scott ( <u>Issue 45 Summer 2022</u> ).
	Note: Caulerpa prolifera detected in Newport Bay, CA in March 2021. Efforts to remove this highly invasive seaweed swung into action within 17 days using a Rapid Response Eradication Plan. While close to 100% has been removed ongoing surveillance is continuing.
	Earlier detection (2000) of the close relative <i>C. taxifolia</i> in two Southern Californian lagoons (Agua Hedionda Lagoon near San Diego and Huntington Harbor) resulted in successful eradications after a period of 6 years (2006) at a cost of US\$7m.
February 2022	Caulerpa Great Barrier Island 2021 Response, Technical Advisory Group Report.  Not publicly available but available on request through OIA request with author names redacted!
	Note: No mention of diver directed suction dredging as an option for efficient and effective removal of Caulerpa biomass.
August 2022	Hauraki Gulf Forum public meeting with Biosecurity New Zealand to raise alarm about threat of Caulerpa to the Gulf.
	Hauraki Gulf Forum follow up letter to John Walsh, Biosecurity NZ, drawing attention to key provisions in the Hauraki Gulf Management Park Act relevant to the incursion.



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November 2022	Waiheke Marine Project set up a marine monitoring and surveillance to detect exotic Caulerpa around Waiheke using two remote operating vehicles (ROV). This project has provided key insights into the immaturity of our marine biosecurity system in NZ.
February 2023	Cyclone Gabrielle hits Great Barrier Island and washes up 50-100 tonne of Caulerpa onto Okupu beach (12-14 February). Motairehe Ltd. Contracted by MPI to clean it up.
March 2023	Susan Botting Stuff interview with Glenn Edney 'Superspreader seaweed threatens Northland coast, ocean ecologist warns' (16 March).
April 2023	Craig Thorburn, Waiheke Marine Project, presentation <i>Clearing up Caulerpa</i> at Waiheke Pestival (23 April).
	NIWA Caulerpa Report: Impact of Exotic Caulerpa on native species.
May 2023	Te Rawhiti environmental restoration and pest control specialist Rana Rewha (Ngāti Kuta) finds 10-20 cm clumps of Caulerpa on the beach at Omakiwi cove (3 May).
	Northland Council (Jack Craw) <u>slams Government for lack of action</u> on invasive marine pest (8 May).
	Revive our Gulf letter to Hon. Damien O'Connor (Minister for Biosecurity) and Hon. Willow-Jean Prime (Minister for Conservation) re 'Exotic Caulerpa: response to this new threat to Tīkapa Moana/Te Moananui-ā-Toi/The Hauraki Gulf (15 May).
	Northland Regional Council demands urgent meeting with Biosecurity Minister over Caulerpa invader (17 May).
	Chairs of NRNWKA Trust and Ngāti Paoa Iwi Trust letter to Hon. Damien O'Connor (Minister for Biosecurity) regarding 'Urgent action and budget required to eliminate Caulerpa' (18 May).
	LegaSea letter to Hon. Damien O'Connor (Minister for Biosecurity), Hon. Willow-Jean Prime (Minister for Conservation) and Hon. Rachel Brooking (Minister for Oceans and Fisheries) re 'Response to exotic Caulerpa in the Hauraki Gulf/Tīkapa Moana' (19 May).



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	Spread of Caulerpa to Bay of Islands announced. Susan Botting Stuff ' <u>Caulerpa</u> invader seaweed found in Bay of Islands, Northland' (19 May).
	Andrea Vance Stuff article Killer seaweed invasion is 'an environmental disaster on the scale of the Rena' (21 May).
	Aotea Caulerpa Governance Group meeting Monday 22 May – changes to mana whenua membership.
	Mark Leishman RNZ follow up interview with Barry Scott (22 May).
	Bay of Islands shudders as <u>Caulerpa identified in more than a dozen locations</u> . RNZ (30 May).
	Susan Botting Stuff ' <u>Superspreader seaweed found in more than 10 spots in Northland's Bay of Islands</u> ' (30 May).
	Hui at Rawhiti marae for Biosecurity NZ to present to community on presence of Caulerpa in Bay of Islands (31 May).
	Exotic Caulerpa reported to be widespread in Omakiwi Bay, Rawhiti, Bay of Islands (TV3 News 31 May).
June 2023	Anchor ban at Omakiwi Bay (4 June).
	Rapid Response and Eradication of Caulerpa in California: Lessons Learned. Webinar by marine biologist Rachel Woodfield as part of the 2023 California Invasive Species Action Week Lunchtime Talks (5 June).
	North Island Councils combine in <u>urgent call to government for Caulerpa support</u> (8 June).
	CAN put in place in Omakiwi Bay to control the "the maggot of the sea" to quote Kaumatua Hone Martin (12 June).
	CAN a 'step in the right direction' says Jack Craw (14 June).
	Northland east coast iwi Naātiwai fear Caulerpa already in rohe (15 June).
	<u>Caulerpa in Northland: fisherman calls for community support</u> (16 June).
	Northland calling for eradication of Caulerpa (21 June).



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	AGBET website on Caulerpa set up (25 June).	
July 2023	Video of Caulerpa in Schooner Bay by Gray Lewis (4 July).	
	<u>Tackling the invasive seaweed Caulerpa in Northland</u> . Kathryn Ryan interviews John Walsh from MPI and Kaeden Leonard from NRC (5 July).	
	Caulerpa found in the North Channel northwest of Kawau (7 July).	
	Biosecurity NZ disappointed over Caulerpa seaweed find in Hauraki Gulf (8 July).	
	"2023 Exotic Caulerpa Suction Dredge Technical Advisory Group Report" completed for Biosecurity New Zealand (10 July).	
	Waatea News Interview with Nicola MacDonald/Ngāti Manuhiri Settlement Trust Chief Executive on Caulerpa (13 July).	
	Report from Suction Dredge TAG publicly released (22 July).	
	MPI Hui on Aotea Great Barrier Island announcing site of Suction Dredge Trial and update on latest surveillance data (25 July).	
	John Sibley from Tiritiri Matangi on Caulerpa with very unlikely scenario of Caulerpa arriving here on ocean currents.	
August 2023	Caulerpa found at Waiheke (2 August).	
	Te Wero Nui <u>"Combating Caulerpa"</u> roadshows at Waitangi, Tāmaki Makaurau and Whitianga (2 August).	
	Roadshow to help stop the spread of Caulerpa. Nicola MacDonald talks to Jesse Mulligan on RNZ (2 August).	
	Ngāti Rehua Ngātiwai ki Aotea file Waitangi Tribunal claim against the Crown for negligence on allowing Caulerpa to spread at Aotea (4 August).	
	Caulerpa invasive seaweed threat spreading, by Susan Bottling (8 August).	
	Monumental failure in marine surveillance and biosecurity preparedness – Barry Scott's editorial in the winter Environmental News (16 August).	



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Coromandel marine pest Caulerpa needs more than monitoring, expert says. Commentary by Eric Munoz, consultant and author of the book Caulerpa Conquest (16 August).

Iwi jumps in to remove invasive seaweed Caulerpa near Kawau Island (18 August).

Iwi want swift action on seaweed threat – Waatea News (21 August).

Link for the Caulerpa Surveys by Waiheke Marine Project.

Super-spreader seaweed Caulerpa to be dredged in Northland's Bay of Islands (29 August).

Kate Hawkesby on NewstalkZB – <u>Everyone seems to know what to do about the</u> killer seaweed – Except the Government (30 August).

Marine Biosecurity News with good information on Caulerpa for boaties and tools for proactive surveillance by Northland Regional Council.

### September 2023

MPI to start suction dredge trial in Tryphena (14 September).

Science Media Centre expert reaction to the MPI media release (14 September).

Suction Dredge Trail to start soon at Te Rawhiti (15 September).

Diver directed suction dredge trial carried out at Tryphena Harbour (18-28th Sept). Area of 1200 m<sup>2</sup> dredged in Shoal, Pūriri and Schooner Bays and mats plus chlorine trialed. Also dredged two sites in Port Fitzroy (FITZ151 and BRO144).

Off the beaten track with Kennedy Warne on Nine to Noon with Kathryn Ryan (18 September).

Link to subscribe to Caulerpa Newsletters from MPI.

Biosecurity New Zealand announces the establishment of a TAG to advise on what management of exotic Caulerpa should look like in the long-term future and a national strategy to achieve this. "Strategic TAG" established to make recommendations on how to manage exotic Caulerpa now that eradication is deemed "not possible" by BNZ (29 September).



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	Kaumatua and community hui at Okiwi agrees to support surveillance proposal to understand how far exotic Caulerpa has spread north to inform Aotea's response and changes to the CAN (29 September).
	Green Party Oceans Policy launches, including a commitment to stop the spread of exotic Caulerpa and increase investment in marine biosecurity (30 September).
October 2023	Ngāti Paoa granted permission to remove exotic Caulerpa at Waiheke under section 52 of the Biosecurity Act 1993 (9 October).
	Second MPI Aotea exotic Caulerpa "action group" workshop agrees to progress and jointly fund the surveillance proposal (11 October).
	Help stop the spread of exotic Caulerpa in Tāmaki Makaurau (24 October).
	Original CAN expiry date; MPI extends CAN until 30 <sup>th</sup> November (31 October).
November 2023	Why Northland's Caulerpa invasion is a problem, Susan Bottling (18 November).
	Fears invasive seaweed could cause environmental disaster (19 November).
	<u>Concerns for exotic seaweed on Aotea Great Barrier Island</u> . Charlotte Cook interviews Barry Scott (20 November).
	<u>Green menace: Public meetings held on invasive seaweed Caulerpa</u> . Checkpoint with Lisa Owen, story by Peter de Graaf RNZ (20 November).
	Caulerpa's spread has some Aotea Great Barrier locals throwing in the towel (20 November).
	Sharon Brettkelly on the Detail: <u>"The smothering weed spreading fast and far"</u> – Interviews with Opo Ngawaka, Barry Scott and MPI (23 November).
	The fast-growing invasive seaweed chocking New Zealand's coastline, Eva Corlett for The Guardian (23 November).
	Biosecurity New Zealand hui at Claris. Presentation by John Walsh followed by discussion on the future CAN and next steps for Aotea (23 November).



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First pilot surveillance of Port Fitzroy (funded by AGBET) by Waiheke-based Logan Marine finds no significant Caulerpa but 5 small sites which need further checks. Information was sent to MPI for identification (no response at time of writing - 9 weeks) (21-23 November).

Waiheke story in Gulf News by Lisa Hamilton (27 November).

Briefing to Incoming Ministers on Caulerpa from the perspective of affected communities was sent to the new Minister of Biosecurity and 3 others, as well as the offices of the PM and Deputy. Only the Minister for Conservation responds (28 November).

Biosecurity New Zealand Newsletter (30 November). Updated fishing and anchoring controls at Aotea in force tomorrow. Small piece of exotic Caulerpa found at Medlands Beach. New summer ad campaign to help stop the spread of exotic Caulerpa.

#### December 2023

Second Logan Marine survey of Port Abercrombie and Port Fitzroy finds no significant exotic Caulerpa but some areas require expert identification (1-3 December).

MPI and Auckland Council plan media and signage to raise awareness of restrictions in response to please from Aotea community for more support (mid-December).

Newsroom: Matthew Scott – <u>NZ's most unwanted species invading Hauraki</u> Gulf (12 December).

Newshub report from Isobel Ewing for TV3 news: Great Barrier Island locals call for urgent action to battle invasive seaweed Caulerpa (17 December).

Aotea-specific "Help Stop the Spread" flyer and posters are released on-island and in digital media as part of a campaign to raise awareness of restrictions amongst boaties; also used by on-water and wharf ambassadors (MPI refuse to endorse this) (18 December).

Retrospective eDNA analysis by Michael Bunce, DOC Chief Science Advisor, identified Caulerpa brachypus in samples from Okupe Bay taken in November 2020 – 8 months before first identified by Jack Warden (21 December).



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	How to stop superspreading seaweed Caulerpa that can grow 3cm a day, Jamie Morton (26 December).
	Peak boat traffic period: three on-water ambassador boats, and two wharf-based ambassadors, are employed by Auckland Council to educate boaties on stopping the spread of exotic Caulerpa over the summer period (28 December to 29 January).
January 2024	Caulerpa discovered at a new site in Port Abercrombie by a recreational diver.  Posted on iNaturalist (7 Janaury).
	More Caulerpa seaweed discovered off Great Barrier Island, locals worried.  Jamie Morton for the Herald (16 January).
	Fears invasive seaweed could spread through Hauraki Gulf (17 January).
	Ahu Moana hui; team members note the increase in exotic Caulerpa at Schooner Bay (23 January).
	Craig Thorburn reports that on Waiheke <i>Caulerpa parvifolia</i> has not grown as expected and suggests that given Kawau and Great Mercury have only <i>C. parvifolia</i> it may not be thriving there as well (24 January).
	New Zealand-first dredging machine tackles invasive Caulerpa in Bay of Islands (25 January).
	Ngāti Rehua Ngātiwai ki Aotea Trust agree to progress locally led response (28 January).
	Waiheke Marine Project announces that removal trial of exotic Caulerpa begins at Waiheke Island (31 January).
February 2024	Envirokiwi hand collect samples of Caulerpa brachypus as part of a University of Auckland research project to assess how caulerpa growth is affected by temperature and light (5 February).
	Dale Husbands interviews Barry Scott on Caulerpa (8 February).
	Auckland iwi and carpet company work to eradicate invasive seaweed (11 February).
	Illegal anchoring in Bay of Islands (12 February).



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Our Auckland: Caulerpa update shows active response (14 February).

Our Auckland: Environmental Services: Aotea Exotic Caulerpa Update (14 February).

Anchoring breaches within the CAN on Great Barrier Island (17 February).

Government boost to fight against Caulerpa – Hon. Andrew Hoggard. Media release from the Beehive (23 February).

Invasive Caulerpa described as biggest threat to New Zealand marine life (10 March).