

Table S1. Summary of paralytic shellfish poisoning reports in British Columbia, Canada from 1793-2020

October 2021

Report #	Date of Consumption	Incubation period range (hr)	No. ill (no. death)	Shellfish species consumed	Location description ^a	Harvest Area-Subarea ^a	Self-harvest or consumer Purchase (detail)	Shellfish sample (location) description: STX result as µg STX-eq 100 g ⁻¹ (date) (area was Closed or Open at time of harvesting)	Probable/confirmed	Source of info
17	10 Oct 1988	5	1(0)	Oysters	Rendunda Sea Farms	Unknown	Purchased (restaurant)	N/A	Probable	PC
18	11 Oct 1988	6	3(0)	Clams	Kitkatla, north of Prince Rupert	5-3	Self-harvested (FN)	Biomonitored clams (from area): 300 (Nov 1) (Closed)	Probable	[11]; PC
19	25 Oct 1988	Between 0.25 -2.5	10(0)	Butter clams	Edye Pass, Canoe Pass in Prince Rupert	4-4, 4-8	Self-harvested (FN)	Leftover clams (from Canoe Pass): 1300-1500; clams (from Edye Passage): 1700; one case 387 µg in gastric fluid and 131 µg in undigested solids (Closed)	Confirmed	[12, 13]
PETS			CATS 1(2)							
20	9 Apr 1989	10	1(0)	Rock scallops	Queen Charlotte City (hospital)	2-1	Self-harvested	N/A (Closed)	Probable	PC
21	17 Jun 1989	7	8(0)	Clams	Campbell River (hospital)	13-4	Self-harvest	N/A (Unknown)	Probable	PC
22	18 Aug 1989	Within 1 day	1(0)	Little neck clams	Unknown	Unknown	Purchased (retail)	Same batch clams (from store): not detected (Aug 21) (Unknown)	Probable	[14]
23	3 Dec 1989	0.25 - 2	6(0)	Butter clams	Flores Island near Hot Spring Cove	24-3	Self-harvested (FN)	Leftover butter clam chowder: 79 in broth; 230 in clam meat (Closed)	Confirmed	[15]
PET	27 Dec 1989		1(0)	Scallops	-	-	-	-		
24	20 Jun 1991	5	2(0)	Oysters and Crab	Baynes Sound Knights Inlet	14-8 12-29	Purchased (retail) Self-harvested (locals)	N/A (Open) N/A (Open)	Probable	[16]
25	20 Apr 1992	0.25	2(0)	Clams	Kingcome Inlet	12-43	Self-harvested (fishers)	Leftover raw cockles: 6700; butter clams 10,000 (Open, closed the following day)	Confirmed	[17]
26	7 Oct 1992	1	1(0)	Pink scallops (whole)	Egmont, Earle's cove	16-10	Self-harvested	N/A (Closed)	Probable	PC
27	30 Dec 1994		1(0)	Clams and mussels	Unknown	Unknown	Purchased (restaurant)	Same batch clams, mussels (from restaurant): <40 (Unknown)	Probable	[18]
28	5 Sep 1997	3	1(0)	East coast mussels	Nova Scotia	-	Purchased (retail)	Same batch mussels (4 sacks from store): <44 (Open)	Probable	[19]
PET	7 Aug 1997	4	1(0)	Mussels	Galiano Island, Saltspring	-	-	N/A	Probable	PC
29	11 Oct 1997	2	3(0)	Pink and spiny scallops	Canoe Rock, Portland Island (park)	18-6	Self-harvested (locals)	N/A (Closed to all bivalve shellfish due to toxic PSP bloom on Sep 5. No signs posted.)	Confirmed	[20]
30	16 Oct 1997		2(0)	Oysters, butter clams	Kulleet Bay, Ladysmith	17-5	Self-harvested (FN)	Biomonitored mussels (Coffin Point): >5000 (Oct 13) (Closed, harvest area under prohibition due to toxic bloom.)	Confirmed	[21, 22]
31	2 Jan 1998	1.5 – 2	8(0)	Butter clams	Coffin Point near Ladysmith	17-5, 17-6, 17-7	Self-harvested (FN)	Biomonitored butter clams (3 different locations in Area 17): 580-810 (early Dec) (Closed, harvest area under prohibition for all bivalve species except littleneck clams, manila clams, and oysters due to toxic bloom)	Confirmed	[23]
32	May 1999		2(0)	Scallops	Herbert Inlet	24-4	Self-harvested (employees)	N/A (Closed May 20)	Probable	[24]; FN0315
33	8 Dec 2002	0.5	1(0)	Butter clams	Rivers Inlet, Port McNeill	9-6	Self-harvested	N/A, no testing in area 9 in 2002. (Closed)	Probable	PC; FN1165
34	31 Jul 2003		6(0)	Mussels	Effingham Inlet	23-6	Purchased (retail)	Leftover mussels: 2100 (Closed)	Confirmed	[25-27]; FN0517

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35	23 May 2004		9(0)	Clams, cockles	Porpoise Bay, Sechelt (park)	16-5	Self-harvested (campers)	N/A in 16-5. Biomonitored mussels (adjacent harvest area 16-6 Storm Bay): 200 (May 21), 1600 (May 16), 3500 (Jun 2) (Closed; no signs posted)	Probable	PC; [28] FN0290
36	5 Jun 2004	6	1(0)	Mussels	Unknown	Unknown	Purchased (restaurant)	N/A (Unknown)	Probable	PC
37	5 Apr 2005		6+(0)	Butter clams	Cowichan	18-7, 18-8	Self-harvested (FN)	Biomonitored mussels (from area): <44 (Mar 14, Apr 12) (Closed to butter clams)	Probable	[29-31]
38	18 Sep 2006	4	1(0)	Crab	Tofino	24-9	Self-harvested (fisher)	Biomonitored mussels (from area): <42 (Sep 18); (adjacent harvest area 24-8): 44 (Sep 18). (Open to all bivalves except butter clams and scallops)	Probable	[32]; FN0868
39	25 Sep 2008	1	2(0)	Clams (canned)	Product of Thailand	-	Purchased (retail)	Leftover samples: <40 µg/100g	Probable	[33, 34]
40	6 Nov 2009	0.25	1(0)	Mussels	Tonovin Beach, Tofino (park)	24-8	Self-harvested (local campers)	Biomonitored mussels (from area): 130 (Sep 27); 67 (Oct 4); <44 (Oct 12, 19, Nov 1, 15) (Closed)	Confirmed	[35] FN0907
41	13 Jun 2010		4(0)	Cockles	Bamberton Beach (park)	19-8	Self-harvested (campers)	Leftover cockles and raw littleneck clams (from area): ,44; biomonitored mussels (from area): <44 (Jun 9, 14); 97 (Jun 22); 410 (Jun 28) (Open to some species: littleneck, manila clams, oysters, mussels. Close to other bivalve species)	Probable	Database ^A ; FN0418
42	29 Sep 2011	3 – 96	2(0)	Mussels	Okeover Inlet	15-4	Purchased (retail)	Biomonitored mussels (from area): < 40 (Sep 25), 40 (Oct 1); 330 (Oct 8) (Open to all shellfish species except butter clams)	Probable	[36] Database ^A ; FN0926
43	12 Oct 2011		1(0)	Mussels	Okeover Inlet	15-4	Purchased (restaurant)	Biomonitored mussels (from area): 40 (Oct 1); 330 (Oct 8); 790 (Oct 14) (Open to all shellfish species except butter clams. Closed to all bivalves on Oct 14)	Confirmed	[36] Database ^A ; FN1005; FN1028
44	17 Jul 2012		4(0)	Manila clams, oysters	Effingham and Useless Inlets, Sechart Channel	23-6, 23-8	Self-harvested (locals, tourists)	Biomonitored mussels (from area 23-6): <25 (Jul 10), 120 (Jul 16), 5200 (Jul 17), 62 and 3000 (Jul 19); (from area 23-8): 28 (Jul 8), 34 (Jul 17), <25 (Jul 19) (Open to some species (Jul 5): manila, littleneck clams, oysters, mussels. Closed to other bivalve species. Closed to all species (Jul 18)	Confirmed	[37]; Database ^A ; FN0553, FN0610
45	5 Dec 2013	3	1(0)	Clams	Silva Bay, Gabriola Island (park)	17-10	Self-harvested (boaters)	N/A. Self-harvested in Aug, frozen. Biomonitored geoduck: <25 (Apr 21, last sample report for 2013) (Open to some species: littleneck, manila, geoduck, horse clams, oysters, mussels. Closed to other bivalve species)	Probable	PC; Database ^A ; FN1180
46	18 Jan 2014	1	1(0)	Clams	Gabriola Island (park)	17-10	Self-harvested (camper)	N/A (no biomonitored samples reported for 2014) (Open to some species: manila, littleneck, geoduck, horse clams, oysters mussels. Closed to other bivalve species)	Probable	PC; FN0040
47	18 Mar 2015		1(0)	Clams	Haida Gwaii area	2-1	Self-harvested	Biomonitored mussels: <25 (Jun 5, first test of harvest area that year) (Closed)	Probable	PC; FN0424
48	16 May 2015	0.25	1(0)	Mussels	Mystic Beach, Juan de Fuca (park)	20-4	Self-harvested (campers)	Beach mussels (from area): <25 (May 26); biomonitored mussels <25 (May 12, May 20) (Open to some species: littleneck, manila clams, oysters, mussels. Closed to other bivalve species)	Probable	PC; Database ^A ; FN0424

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49	23 May 2015	0.5	2(0)	Mussels and clams	2 sources implicated BC and Prince Edward Island (PEI)	14-8 and PEI	Purchased (retail)	Biomonitored mussels (from area) <25 (May 18, 25) (Open. Area 14-8 open to all bivalves except butter clams)	Probable	PC; Database ^A ; FN0451
50	2 Jul 2015	1.5	1(0)	Oysters	West Roscoe Bay	15-5	Self-harvested (recreational, boater)	Biomonitored mussels (from area): <25 (Jun 28, Jul 6). (Open to some species: manila, littleneck clams, oysters, mussels, scallops. Closed to other bivalve species)	Probable	PC; Database ^A ; FN0610
51	8 May 2016	1	1(0)	Mussels	Unknown	Unknown	Purchased (restaurant)	N/A (Unknown)	Probable	PC
52	10 Jul 2016	0.5	2(0)	Clams	Read Island	13-17	Purchased (farmers' market)	Biomonitored mussels (from area): 120 (Apr 27), 110 (May 5), <25 (Jun 29, Jul 7); biomonitored oysters (from area): <25 (Jun 6) (Open to some species: manila, littleneck, varnish clams, oysters, mussels. Closed to other bivalve species)	Probable	PC; FN0635
53	5 Sep 2016	6.0	4(0)	Mussels	Newfoundland	-	Purchased (restaurant)	Same batch (from restaurant): <25 (Open)	Probable	Database ^{B,C}
54	14 Jan 2017	4	1(0)	Clams	BC (Unknown)	Unknown	Purchased (retail)	N/A (Unknown)	Probable	PC; Database ^C
55	24 May 2017	1	1(0)	Clams	Rathrevor Beach, Parksville (park)	14-1	Self-harvested (local)	Biomonitored mussels (from area): <25 (Jun 12, first test of harvest area that year) (Closed)	Probable	PC; FN0450
56	22 Jun 2017		1(0)	Crab	Unknown	Unknown	Self-harvested	N/A (Unknown)	Probable	PC
57	20 Aug 2017	12	1(0)	Clams	Porpoise Bay, Sechelt (park)	16-5	Self-harvested	Biomonitored geoduck clams (from area): <25 (Jul 21, last date of sampling from this area in 2017); biomonitored mussels (adjacent area 16-6): <25 (Aug 13, Aug 25) (Open to some species: manila, littleneck clams. Closed to other bivalve species)	Probable	PC; FN0830
58	11 Mar 2018	3	1(0)	Oysters	Okeover Inlet	15-4	Purchased (retail store)	Biomonitored mussels (from area): <25 (Feb 26, Mar 12) (Open to some species: manila, littleneck clams, oysters, scallops. Closed to other bivalve species)	Probable	PC; FN0176
59	20 Jun 2018	2.0	4(0)	Mussels	Saanich Inlet	19-8	Self-harvested (FN)	Leftover mussels (from soup): 830 (Closed)	Confirmed	PC; Database ^{B,C} ; FN0499
60	15 Sep 2018	1.5	2(0)	Mussels	Marina Island and a WA state source	13-15 and WA state	Purchased (restaurant)	Biomonitored mussels (from area): <25 (Sep 9, 16); STX not detected in US source. (Open to some species: manila, littleneck, geoduck and horse clams, oysters, mussels. Closed to other bivalve species)	Probable	PC; FN1000
61	29 Oct 2018	0.25	1(0)	Mussels	Sechelt inlet	16-6	Self-harvested (fisher)	Leftover mussels (from soup): 20,000; frozen mussels: 15,000 (Closed)	Confirmed	PC; Database ^C ; FN197
62	13 Mar 2019	1.5	3(0)	Butter clams	Dundas Island	4-1	Self-harvested (FN)	Leftover butter clams (from 2018 harvest, frozen): 1300 (siphon), 180 (gut) of clams. Urine results: >116 ng STX eq./mL urine and 25 ng STX eq./mL urine (Closed)	Confirmed	Northern HA notification; Database ^{B,C}

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63	4 Aug 2020	0.5	1(0)	Oysters	Saltspring Island	17-9 or 18-7	Self-harvested (local)	Biomonitored mussels (from 17-9): 78 (Jul 29), <25 (Aug 10); biomonitored mussels (from 18-7): 180 (Jul 30), 85 (Aug 5), 43 (Aug 12) (Closed)	Confirmed	PC; FN0742

^a – Location descriptions and harvest sub-areas may be visualized on the BCCDC Biotxin and Sanitary Contamination Closures Map for Shellfish Harvesting in British Columbia at maps.bccdc.ca/shellfish
Databases: A=BCCDC shellfish related illness database (1994-2018); B= Canadian Network for Public Health Intelligence database; C=Panorama database (2016 to present);

PC – BC Drug and Poison Information Centre call records; FN – Fishery Notices from Fisheries and Oceans Canada, https://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm?pg=fishery_search&ID=all to assess area closures ^b – Citations differ, [8] reports a single illness, [7] reports two illnesses.

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