

1219 Supplemental Tables and Figures

1220 Supplemental Tables

1221 **Table S1.** Attributes of papers that conduct studies of biotoxin depuration for aquatic organisms
 1222 collected for the literature review analysis.

1223

Column	Description	Details
paper_id	Paper id	Example: Lund et al. (1997)
comm_name	Common name	Example: Dungeness crab
sci_name	Scientific name	Example: Metacarcinus magister
syndrome	Syndrome	Amnesic, Diarrhetic, Paralytic, Azaspiracid, Ciguatera, Neurotoxic, Cyanotoxin
hab_species	HAB species	Examples: Pseudo-nitzschia australis
biotoxin	Biotoxin	Domoic acid, DSTs,PSTs, Azaspiracid, Ciguatoxin, Brevetoxin, Cyanotoxin, Other
subtoxin	Sub-biotoxin	Examples: dcSTX, GTX3, okadaic acid, etc
study_type	Study type	Llab, field, field (non-toxic)
exp_type	Experiment type	Examples: Temperature, Exposure, Diet type, etc.
treatment	Experimental treatment	Examples: 18°C, 20°C, 30 psu, 35 psu, etc.
feed_scenario	Feeding scenario	Fed clean, starved, ambient seawater, wild
tissue	Tissue type	Examples: digestive gland, hepatopancreas
source	Source of depuration rate	Examples: Figure 1, Table 1, Supplemental Data 1, Results 3.2
rate_type	Derivation of depuration rate	provided, derived, digitized
ncomp	Number of compartments	None, zero, one, two, one vs. two, one vs. two vs. three
rate_hr	Depuration rate (1/hr)	
hlife_hr	half-life (hr)	
rate_d	Depuration rate (1/day)	
hlife_d	half-life (day)	
notes	General notes	

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1225 **Table S2.** Tissue harmonization by class.

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Harmonized tissue	Synonyms
<i>Malacostraca</i>	
Hepatopancreas	Hepatopancreas, digestive gland
Soft tissue	Soft tissue, whole
<i>Gastropoda</i>	
Foot	Foot, muscle
Hepatopancreas	Hepatopancreas, digestive gland
<i>Bivalvia</i>	
Hepatopancreas	Hepatopancreas, digestive gland
Soft tissue	Soft tissue, tissue, edible tissue, edible portion, meat, flesh, whole flesh, whole, whole tissue, total tissue, non-viscera

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1228 **Table S3.** The number of papers providing depuration rates by species and syndrome
 1229 (par=paralytic; amn=amnesic; dia=diahoretic; cya=cyanotoxin; neu=neurotoxic; cig=ciguatera;
 1230 aza=azaspiracid; oth=other).

1231

Class	Family	Scientific name	Common name	Par	Amn	Dia	Cya	Neu	Cig	Aza	Oth
Asidiaceae	Pyridae	<i>Pyura chilensis</i>	Red sea squirt	1							
Bivalvia	Cardiidae	<i>Acanthocardia tuberculata</i>	Rough cockle	1							
Bivalvia	Cardiidae	<i>Cerastoderma edule</i>	Common cockle	2							
Bivalvia	Cyrenidae	<i>Corbicula fluminea</i>	Asian clam				1				
Bivalvia	Donacidae	<i>Donax trunculus</i>	Abrupt wedge shell	1		1					
Bivalvia	Hiatellidae	<i>Panopea globosa</i>	Geoduck clam	1							
Bivalvia	Mactridae	<i>Spisula solida</i>	Surf clam	1							
Bivalvia	Mactridae	<i>Spisula solidissima</i>	Atlantic surfclam	1							
Bivalvia	Mesodesmatidae	<i>Paphies australis</i>	Pipi clam							1	
Bivalvia	Myidae	<i>Mya arenaria</i>	Soft-shell clam	1	1						
Bivalvia	Mytilidae	<i>Aulacomya atra</i>	Chilean ribbed mussel	1							
Bivalvia	Mytilidae	<i>Geukensia demissa</i>	Atlantic ribbed mussel			1				1	
Bivalvia	Mytilidae	<i>Mytella guyanensis</i>	Trinidad swamp mussel			1					
Bivalvia	Mytilidae	<i>Mytilus californianus</i>	California mussel	1	1		1				
Bivalvia	Mytilidae	<i>Mytilus chilensis</i>	Chilean mussel	3							1
Bivalvia	Mytilidae	<i>Mytilus coruscus</i>	Korean hard-shelled mussel	1							
Bivalvia	Mytilidae	<i>Mytilus edulis</i>	Blue mussel	7	5	10	6			1	6
Bivalvia	Mytilidae	<i>Mytilus galloprovincialis</i>	Mediterranean mussel	9		5	3				
Bivalvia	Mytilidae	<i>Mytilus spp.</i>	Mussels	1						1	1
Bivalvia	Mytilidae	<i>Perna canaliculus</i>	Green-lipped mussel	1							1
Bivalvia	Mytilidae	<i>Perna perna</i>	Brown mussel			1					
Bivalvia	Mytilidae	<i>Perna viridis</i>	Asian green mussel	3		1		1			
Bivalvia	Ostreidae	<i>Crassostrea tulipa</i>	West Africa mangrove oyster			1					
Bivalvia	Ostreidae	<i>Crassostrea virginica</i>	Eastern oyster	2	1	1	1	3			1
Bivalvia	Ostreidae	<i>Magallana gigas</i>	Pacific oyster	6	1		4				2
Bivalvia	Ostreidae	<i>Magallana rivularis</i>	Jinjiang oyster	2							
Bivalvia	Ostreidae	<i>Ostrea chilensis</i>	Flat oyster	1							
Bivalvia	Ostreidae	<i>Ostrea edulis</i>	European flat oyster			2					2
Bivalvia	Ostreidae	<i>Saccostrea glomerata</i>	Sydney rock oyster	1							
Bivalvia	Pectinidae	<i>Aequipecten opercularis</i>	Queen scallop		1						1
Bivalvia	Pectinidae	<i>Argopecten irradians</i>	Bay scallop	4		1					
Bivalvia	Pectinidae	<i>Argopecten purpuratus</i>	Peruvian calico scallop		1						
Bivalvia	Pectinidae	<i>Crassadoma gigantea</i>	Purple-hinged rock scallop	1		1					
Bivalvia	Pectinidae	<i>Mimachlamys crassicornata</i>	Noble scallop	2							
Bivalvia	Pectinidae	<i>Mimachlamys varia</i>	Variegated scallop		1						
Bivalvia	Pectinidae	<i>Mizuhopecten yessoensis</i>	Japanese scallop	4							
Bivalvia	Pectinidae	<i>Nodipecten subnodosus</i>	Pacific giant lions-paw scallop	1							
Bivalvia	Pectinidae	<i>Pecten maximus</i>	King scallop		6						
Bivalvia	Pectinidae	<i>Placopecten magellanicus</i>	Atlantic sea scallop	2	2						
Bivalvia	Pectinidae	<i>Scaeochlamys farreri</i>	Farrer's scallop	2							1
Bivalvia	Pharidae	<i>Ensis macha</i>	Navaja clam	1							
Bivalvia	Pharidae	<i>Siliqua patula</i>	Pacific razor clam		2						
Bivalvia	Pharidae	<i>Sinonovacula constricta</i>	Constricted tagelus								1
Bivalvia	Psammobiidae	<i>Hiatula diphos</i>	Purple clam	1							
Bivalvia	Solenidae	<i>Solen marginatus</i>	Grooved razor shell	1							
Bivalvia	Veneridae	<i>Anomalocardia flexuosa</i>	Anomalocardia clam			1					
Bivalvia	Veneridae	<i>Callista chione</i>	Smooth clam	1							
Bivalvia	Veneridae	<i>Chamelea gallina</i>	Warty venus	1							
Bivalvia	Veneridae	<i>Mercenaria campechiensis</i>	Hard clam					1			
Bivalvia	Veneridae	<i>Mercenaria mercenaria</i>	Northern quahog	1			1				2
Bivalvia	Veneridae	<i>Ruditapes decussatus</i>	Grooved carpet shell	1		1					2
Bivalvia	Veneridae	<i>Ruditapes philippinarum</i>	Manila clam	3		1	1				
Cephalopoda	Octopodidae	<i>Octopus vulgaris</i>	Common octopus	1							
Copepoda	Acartiidae	<i>Acartia clausi</i>	A. clausi copepod	2	1						
Copepoda	Acartiidae	<i>Acartia hudsonica</i>	A. hudsonica copepod	1							
Copepoda	Calanidae	<i>Calanus finmarchicus</i>	C. finmarchicus copepod		2						
Copepoda	Calanidae	<i>Calanus glacialis</i>	C. glacialis copepod		1						
Copepoda	Temoridae	<i>Eurytemora affinis</i>	E. affinis copepod				1				
Dinophyceae	Noctilucaceae	<i>Noctiluca scintillans</i>	N. scintillans dinoflagellate	1							
Gastropoda	Haliotidae	<i>Haliotis midae</i>	South African abalone	1							
Gastropoda	Haliotidae	<i>Haliotis rubra</i>	Australian blacklip abalone	1							
Gastropoda	Viviparidae	<i>Sinotaia quadrata</i>	Chinese freshwater snail				1				

Malacostraca	Callichiridae	<i>Callichirus major</i>	Carolinian ghost shrimp	1	
Malacostraca	Cancridae	<i>Cancer pagurus</i>	Brown crab	2	
Malacostraca	Cancridae	<i>Metacarcinus magister</i>	Dungeness crab	3	
Malacostraca	Hippidae	<i>Emerita analoga</i>	Pacific mole crab	1	
Malacostraca	Mysidae	<i>Neomysis awatschensis</i>	Mysid crustacean		1
Malacostraca	Palinuridae	<i>Jasus edwardsii</i>	Southern rock lobster	3	
Malacostraca	Palinuridae	<i>Panulirus stimsoni</i>	Chinese spiny lobster	1	
Malacostraca	Penaeidae	<i>Penaeus monodon</i>	Black tiger prawn		1
Mammalia	Delphinidae	<i>Tursiops truncatus</i>	Bottlenose dolphin		1
Teleostei	Alosidae	<i>Brevoortia tyrannus</i>	Atlantic menhaden		1
Teleostei	Batrachoididae	<i>Opsanus beta</i>	Gulf toadfish		1
Teleostei	Ephippidae	<i>Chaetodipterus faber</i>	Atlantic spadefish	1	
Teleostei	Epinephelidae	<i>Epinephelus coioides</i>	Orange-spotted grouper		1
Teleostei	Mugilidae	<i>Mugil cephalus</i>	Striped mullet	2	1
Teleostei	Mugilidae	<i>Mugil liza</i>	Lebranché mullet		1
Teleostei	Salmonidae	<i>Oncorhynchus kisutch</i>	Coho salmon	1	
Teleostei	Scorpaenidae	<i>Pterois volitans</i>	Lionfish		1
Teleostei	Sparidae	<i>Acanthopagrus schlegelii</i>	Black sea bream	1	
Teleostei	Sparidae	<i>Diplodus sargus</i>	White seabream	1	
Teleostei	Sparidae	<i>Lagodon rhomboides</i>	Pinfish		1
Teleostei	Sparidae	<i>Sparus aurata</i>	Gilthead seabream	1	
Teleostei	Tetraodontidae	<i>Takifugu obscurus</i>	Obscure pufferfish		1
Thecostraca	Balanidae	<i>Austromegabalanus psittacus</i>	Giant barnacle	1	

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1234**Table S4.** Diversity of orders, families, and genera of harvested marine molluscs.

Syndrome	Type	Group	Species	Production (1000s mt)	Number of species Harvested	Total	
Amnesic	Order	Arcoida	Blood cockle (<i>Tegillarca granosa</i>)	375.1	8	360	
		Veneridae	Manila clam (<i>Ruditapes philippinarum</i>), Striped venus (<i>Chamelea gallina</i>), Northern quahog (<i>Mercenaria mercenaria</i>)	3885.3	22	428	
		Solecurtidae	Constricted tagelus (<i>Sinonovacula constricta</i>)	1191.3	2	26	
		Mactridae	Atlantic surfclam (<i>Spisula solidissima</i>), Stimpson's surf clam (<i>Mactromeris polynyma</i>)	106.1	10	116	
		Arcticidae	Ocean quahog (<i>Arctica islandica</i>)	42.8	1	1	
	Genus	Perna	Greenshell mussel (<i>Perna canaliculus</i>), Green-lipped mussel (<i>Perna viridis</i>)	118.9	3	5	
		Zygochlamys	Patagonian scallop (<i>Zygochlamys patagonica</i>)	35.5	2	1	
		Veneroida	Manila clam (<i>Ruditapes philippinarum</i>), Constricted tagelus (<i>Sinonovacula constricta</i>), Striped venus (<i>Chamelea gallina</i>), Common cockle (<i>Cerastoderma edule</i>), Grooved carpet shell (<i>Ruditapes decussatus</i>), Triangular tivela (<i>Tivela mactroides</i>), Smooth callista (<i>Callista chione</i>)	5015.8	58	2549	
	Azaspiracid	Order	Arcoida	Blood cockle (<i>Tegillarca granosa</i>)	356.8	8	360
		Ostreoida	Peruvian calico scallop (<i>Argopecten purpuratus</i>), Patagonian scallop (<i>Zygochlamys patagonica</i>), King scallop (<i>Pecten maximus</i>), Commercial scallop (<i>Pecten fumatus</i>), European flat oyster (<i>Ostrea edulis</i>)	107.5	26	548	
		Genus	Ostreida	Pacific oyster (<i>Magallana gigas</i>)	16.3	5	88
			Perna	Greenshell mussel (<i>Perna canaliculus</i>), Brown mussel (<i>Perna perna</i>)	107.2	3	5
			Aulacomya	Ribbed mussel (<i>Aulacomya atra</i>)	2.5	1	3
		Genus	Pectinidae	Atlantic sea scallop (<i>Placopecten magellanicus</i>), Patagonian scallop (<i>Zygochlamys patagonica</i>), King scallop (<i>Pecten maximus</i>)	286.3	20	297
			Veneridae	Striped venus (<i>Chamelea gallina</i>), Northern quahog (<i>Mercenaria mercenaria</i>), Manila clam (<i>Ruditapes philippinarum</i>), Taca clam (<i>Leukoma thaca</i>)	122.0	22	428
			Mactridae	Atlantic surfclam (<i>Spisula solidissima</i>), Stimpson's surf clam (<i>Mactromeris polynyma</i>)	106.1	10	116
			Arcticidae	Ocean quahog (<i>Arctica islandica</i>)	42.8	1	1
			Perna	Greenshell mussel (<i>Perna canaliculus</i>), Green-lipped mussel (<i>Perna viridis</i>), Brown mussel (<i>Perna perna</i>)	126.5	3	5
	Diarrhetic	Order	Ostrea	European flat oyster (<i>Ostrea edulis</i>)	10.6	3	20
			Ostreida	Pacific oyster (<i>Magallana gigas</i>), Slipper cupped oyster (<i>Magallana bilineata</i>)	657.5	5	88
			Arcoida	Blood cockle (<i>Tegillarca granosa</i>)	375.7	8	360
			Family	Constricted tagelus (<i>Sinonovacula constricta</i>)	1191.3	2	26
			Mactridae	Atlantic surfclam (<i>Spisula solidissima</i>), Stimpson's surf clam (<i>Mactromeris polynyma</i>)	106.1	10	116
		Genus	Arcticidae	Ocean quahog (<i>Arctica islandica</i>)	42.8	1	1
			Ruditapes	Manila clam (<i>Ruditapes philippinarum</i>)	3848.4	2	4
			Mizuhopecten	Japanese scallop (<i>Mizuhopecten yessoensis</i>)	505.8	1	1
			Placopecten	Atlantic sea scallop (<i>Placopecten magellanicus</i>)	217.5	1	1
			Perna	Greenshell mussel (<i>Perna canaliculus</i>)	93.5	3	5
	Neurotoxic	Order	Pecten	King scallop (<i>Pecten maximus</i>)	62.2	4	18
			Chamelea	Striped venus (<i>Chamelea gallina</i>)	46.1	1	3
			Zygochlamys	Patagonian scallop (<i>Zygochlamys patagonica</i>)	35.5	2	1
			Arcoida	Blood cockle (<i>Tegillarca granosa</i>)	357.1	8	360
			Ostreida	Pacific oyster (<i>Magallana gigas</i>)	293.1	5	88
		Family	Solecurtidae	Constricted tagelus (<i>Sinonovacula constricta</i>)	1191.3	2	26
			Pectinidae	Japanese scallop (<i>Mizuhopecten yessoensis</i>), Atlantic sea scallop (<i>Placopecten magellanicus</i>), King scallop (<i>Pecten maximus</i>), Queen scallop (<i>Aequipecten opercularis</i>)	734.1	20	297
			Mactridae	Atlantic surfclam (<i>Spisula solidissima</i>)	71.8	10	116
		Genus	Arcticidae	Ocean quahog (<i>Arctica islandica</i>)	42.8	1	1
			Cardiidae	Common cockle (<i>Cerastoderma edule</i>)	14.3	13	222
			Ruditapes	Manila clam (<i>Ruditapes philippinarum</i>)	3813.6	2	4
			Mytilus	Chilean mussel (<i>Mytilus chilensis</i>), Blue mussel (<i>Mytilus edulis</i>), Mediterranean mussel (<i>Mytilus galloprovincialis</i>)	503.5	7	12
			Chamelea	Striped venus (<i>Chamelea gallina</i>)	45.7	1	3
	Paralytic	Order	Leukoma	Taca clam (<i>Leukoma thaca</i>)	11.9	2	3
			Ostrea	European flat oyster (<i>Ostrea edulis</i>)	11.0	3	20
			Arcoida	Blood cockle (<i>Tegillarca granosa</i>)	453.6	8	360
		Family	Solecurtidae	Constricted tagelus (<i>Sinonovacula constricta</i>)	1191.3	2	26
			Arcticidae	Ocean quahog (<i>Arctica islandica</i>)	42.8	1	1
			Genus	Argopecten	Peruvian calico scallop (<i>Argopecten purpuratus</i>)	70.2	3
		Genus	Pecten	King scallop (<i>Pecten maximus</i>)	62.2	4	18
			Chamelea	Striped venus (<i>Chamelea gallina</i>)	46.1	1	3
			Zygochlamys	Patagonian scallop (<i>Zygochlamys patagonica</i>)	35.5	2	1

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1236 **Table S5.** Performance statistics used in model selection.

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Model	ΔELPD	ELPD (sd)	LOOIC (sd)	P (sd)	R^2 (CI)
Taxonomically nested random effects	0	-229.4 (9.2)	458.8 (18.3)	27 (2.6)	0.67 (0.6-0.72)
Species random effects	-0.3	-229.7 (9)	459.4 (18.1)	26.9 (2.5)	0.66 (0.59-0.71)
Phylogenetic random effects	-1.3	-230.8 (9.2)	461.5 (18.5)	25.1 (2.6)	0.65 (0.57-0.71)
Fixed effects only	-26	-255.4 (9.5)	510.8 (19)	16.5 (2.2)	0.49 (0.4-0.56)

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1239 * ELPD = expected log predictive density (higher = better); LOOIC = leave-one-out information
 1240 criterion (lower = better); R^2 = Bayesian R^2 (higher = better); P = effective number of
 1241 parameters; SE = standard error; CI = 95% confidence interval

1242 **Table S6.** Field- and lab-based paralytic shellfish toxin depuration rates predicted by the best performing regression model for
 1243 species included in model training along with the required predictor variables.
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Order	Family	Genus	Scientific name	Common name	Length (cm)	K (1/yr)	Temp (°C)	Field (95% CI)	Lab (95% CI)
Adapedonta	Pharidae	Ensis	<i>Ensis macha</i>	Navaja clam	16.5	0.225	11	0.069 (0.013-0.225)	0.174 (0.03-0.568)
Adapedonta	Hiatellidae	Panopea	<i>Panopea globosa</i>	Geoduck clam	19.8	0.33	8	0.066 (0.015-0.19)	0.169 (0.034-0.501)
Adapedonta	Solenidae	Solen	<i>Solen marginatus</i>	Grooved razor shell	17	0.28	10	0.05 (0.009-0.159)	0.129 (0.022-0.425)
Cardiida	Cardiidae	Acanthocardia	<i>Acanthocardia tuberculata</i>	Rough cockle	9	0.669	26.5	0.006 (0.001-0.016)	0.015 (0.003-0.044)
Cardiida	Cardiidae	Cerastoderma	<i>Cerastoderma edule</i>	Common cockle	5.6	0.62	10	0.101 (0.032-0.243)	0.258 (0.071-0.653)
Cardiida	Donacidae	Donax	<i>Donax trunculus</i>	Abrupt wedge shell	4.4	0.7	26.5	0.035 (0.006-0.114)	0.089 (0.015-0.298)
Cardiida	Psammobiidae	Hiatula	<i>Hiatula diplos</i>	Purple clam	6	0.825	26.5	0.067 (0.017-0.192)	0.168 (0.041-0.478)
Myida	Myidae	Mya	<i>Mya arenaria</i>	Soft-shell clam	10	0.3	10	0.055 (0.015-0.146)	0.14 (0.034-0.397)
Mytilida	Mytilidae	Mytilus	<i>Mytilus californianus</i>	California mussel	25.5	0.25	15	0.034 (0.015-0.061)	0.088 (0.034-0.169)
Mytilida	Mytilidae	Mytilus	<i>Mytilus edulis</i>	Blue mussel	11	0.24	8	0.078 (0.043-0.13)	0.195 (0.113-0.318)
Mytilida	Mytilidae	Mytilus	<i>Mytilus galloprovincialis</i>	Mediterranean mussel	16.5	0.26	17	0.042 (0.026-0.064)	0.105 (0.061-0.17)
Mytilida	Mytilidae	Perna	<i>Perna canaliculus</i>	Green-lipped mussel	15	0.6	26	0.064 (0.016-0.18)	0.156 (0.042-0.43)
Mytilida	Mytilidae	Perna	<i>Perna viridis</i>	Asian green mussel	16.5	1.07	26	0.122 (0.042-0.287)	0.299 (0.114-0.657)
Ostreida	Ostreidae	Crassostrea	<i>Crassostrea virginica</i>	Eastern oyster	30	0.565	24	0.054 (0.021-0.115)	0.135 (0.055-0.281)
Ostreida	Ostreidae	Magallana	<i>Magallana gigas</i>	Pacific oyster	45	0.68	13	0.123 (0.066-0.213)	0.303 (0.189-0.464)
Ostreida	Ostreidae	Magallana	<i>Magallana rivularis</i>	Jinjiang oyster	20.88	0.84	20.5	0.12 (0.046-0.259)	0.293 (0.129-0.562)
Ostreida	Ostreidae	Saccostrea	<i>Saccostrea glomerata</i>	Sydney rock oyster	5	0.7625	24	0.188 (0.045-0.544)	0.458 (0.125-1.26)
Pectinida	Pectinidae	Crassadoma	<i>Crassadoma gigantea</i>	Purple-hinged rock scallop	25	0.5035	16	0.029 (0.008-0.075)	0.072 (0.022-0.175)
Pectinida	Pectinidae	Mimachlamys	<i>Mimachlamys crassicornata</i>	Noble scallop	9.49	0.6626	17	0.183 (0.032-0.626)	0.45 (0.082-1.479)
Pectinida	Pectinidae	Mizuhopecten	<i>Mizuhopecten yessoensis</i>	Japanese scallop	25	0.925	18	0.04 (0.017-0.081)	0.101 (0.043-0.205)
Pectinida	Pectinidae	Nodipecten	<i>Nodipecten subnodosus</i>	Pacific giant lions-paw scallop	15	0.5035	16	0.044 (0.009-0.14)	0.108 (0.022-0.335)
Pectinida	Pectinidae	Placopecten	<i>Placopecten magellanicus</i>	Atlantic sea scallop	20	0.28	8	0.013 (0.006-0.024)	0.034 (0.014-0.07)
Venerida	Veneridae	Callista	<i>Callista chione</i>	Smooth clam	11	0.24	12	0.04 (0.008-0.122)	0.102 (0.02-0.319)
Venerida	Veneridae	Chamelea	<i>Chamelea gallina</i>	Warty venus	5	0.415	14	0.045 (0.009-0.135)	0.113 (0.022-0.352)
Venerida	Veneridae	Mercenaria	<i>Mercenaria mercenaria</i>	Northern quahog	13	0.3257	17	0.102 (0.037-0.225)	0.248 (0.106-0.498)
Venerida	Veneridae	Ruditapes	<i>Ruditapes decussatus</i>	Grooved carpet shell	8	0.48	17	0.033 (0.011-0.087)	0.082 (0.028-0.198)
Venerida	Veneridae	Ruditapes	<i>Ruditapes philippinarum</i>	Manila clam	8	0.52	18	0.031 (0.015-0.058)	0.075 (0.042-0.122)
Venerida	Mactridae	Spisula	<i>Spisula solidia</i>	Surf clam	5	0.3307	11	0.01 (0.004-0.022)	0.024 (0.01-0.051)

1245

1246 **Table S7.** Field- and lab-based paralytic shellfish toxin depuration rates predicted by the best performing regression model for all
 1247 harvested bivalve species along with the required predictor variables.
 1248

Order	Family	Genus	Scientific name	Common name	Length (cm)	K (1/yr)	Temp (°C)	Field (95% CI)	Lab (95% CI)
Adapedonta	Hiatellidae	Cyrtodaria	<i>Cyrtodaria siliqua</i>	Northern propellerclam	11	0.07	8	0.064 (0.004-0.294)	0.161 (0.01-0.75)
Adapedonta	Pharidae	Ensis	<i>Ensis ensis</i>	Pod razor shell	16.5	0.4625	11	0.104 (0.013-0.376)	0.261 (0.031-0.944)
Adapedonta	Pharidae	Ensis	<i>Ensis leei</i>	Atl.jackknife(=Atl.razor clam)	20	0.4625	11	0.099 (0.012-0.357)	0.25 (0.028-0.897)
Adapedonta	Pharidae	Ensis	<i>Ensis macha</i>	Giant jackknife	16.5	0.225	11	0.069 (0.013-0.225)	0.174 (0.03-0.568)
Adapedonta	Pharidae	Ensis	<i>Ensis magnus</i>	Arched razor shell	16.5	0.4625	11	0.104 (0.013-0.379)	0.261 (0.03-0.951)
Adapedonta	Pharidae	Ensis	<i>Ensis siliqua</i>	Sword razor shell	15.5	0.7	11	0.169 (0.017-0.671)	0.421 (0.039-1.644)
Adapedonta	Hiatellidae	Panopea	<i>Panopea generosa</i>	Pacific geoduck	17.5	0.199	8	0.061 (0.009-0.213)	0.154 (0.02-0.537)
Adapedonta	Hiatellidae	Panopea	<i>Panopea zelandica</i>	New Zealand geoduck	17.5	0.25	8	0.066 (0.009-0.23)	0.168 (0.02-0.594)
Adapedonta	Pharidae	Pharus	<i>Pharus legumen</i>	Bean solen	9.982	0.4075	9	0.117 (0.008-0.533)	0.291 (0.019-1.295)
Adapedonta	Pharidae	Siliqua	<i>Siliqua patula</i>	Pacific razor clam	18	0.59	7	0.169 (0.009-0.798)	0.422 (0.023-1.969)
Adapedonta	Pharidae	Sinonovacula	<i>Sinonovacula constricta</i>	Constricted tagelus	15.5	0.4075	9	0.109 (0.007-0.49)	0.272 (0.018-1.215)
Adapedonta	Solenidae	Solen	<i>Solen capensis</i>	Cape razor clam	11	0.28	10	0.061 (0.007-0.231)	0.153 (0.017-0.587)
Adapedonta	Solenidae	Solen	<i>Solen lamarckii</i>	Lamarck's razor shell	10	0.28	10	0.061 (0.007-0.225)	0.154 (0.018-0.574)
Adapedonta	Solenidae	Solen	<i>Solen marginatus</i>	European razor clam	17	0.28	10	0.05 (0.009-0.159)	0.129 (0.022-0.425)
Arcida	Arcidae	Anadara	<i>Anadara antiquata</i>	Antique ark	10.5	1.54	31.75	0.278 (0.006-1.666)	0.676 (0.014-3.854)
Arcida	Arcidae	Anadara	<i>Anadara broughtonii</i>	Inflated ark	8	0.2359	31.75	0.031 (0.001-0.175)	0.078 (0.002-0.422)
Arcida	Arcidae	Anadara	<i>Anadara kagoshimensis</i>	Half-crenated ark	6.2	0.428	31.75	0.039 (0.001-0.209)	0.096 (0.003-0.506)
Arcida	Arcidae	Anadara	<i>Anadara similis</i>	Brown ark	8	0.428	31.75	0.039 (0.001-0.211)	0.096 (0.003-0.516)
Arcida	Arcidae	Anadara	<i>Anadara tuberculosa</i>	Black ark	8	0.515	31.75	0.043 (0.001-0.229)	0.105 (0.004-0.552)
Arcida	Arcidae	Arca	<i>Arca noae</i>	Noah's ark	7	0.165	26.5	0.034 (0.001-0.172)	0.082 (0.003-0.419)
Arcida	Arcidae	Arca	<i>Arca zebra</i>	Turkey wing	10	1.2	26.5	0.171 (0.006-0.882)	0.416 (0.016-2.085)
Arcida	Glycymerididae	Glycymeris	<i>Glycymeris glycymeris</i>	Common European bittersweet	6.5	0.11	12	0.064 (0.003-0.304)	0.158 (0.007-0.747)
Arcida	Glycymerididae	Glycymeris	<i>Glycymeris nummaria</i>	Violet bittersweet	7	0.11	12	0.063 (0.003-0.298)	0.155 (0.007-0.718)
Arcida	Glycymerididae	Glycymeris	<i>Glycymeris ovata</i>	Black bittersweet	4.15	0.11	12	0.068 (0.003-0.32)	0.167 (0.008-0.785)
Arcida	Arcidae	Lunarcia	<i>Lunarcia ovalis</i>	Blood ark	7.6	0.45	25	0.049 (0.002-0.234)	0.122 (0.006-0.566)
Arcida	Arcidae	Tegillarca	<i>Tegillarca granosa</i>	Blood cockle	9	1.055	28	0.118 (0.005-0.571)	0.289 (0.012-1.424)
Cardiida	Cardiidae	Acanthocardia	<i>Acanthocardia spinosa</i>	Sand cockle	8.25	0.669	26.5	0.014 (0.001-0.071)	0.034 (0.003-0.175)
			<i>Acanthocardia</i>						
Cardiida	Cardiidae	Acanthocardia	<i>tuberculata</i>	Tuberculate cockle	9	0.669	26.5	0.006 (0.001-0.016)	0.015 (0.003-0.044)
Cardiida	Psammobiidae	Asaphis	<i>Asaphis violascens</i>	Pacific asaphis	11	0.825	26.5	0.068 (0.004-0.295)	0.167 (0.011-0.729)
Cardiida	Cardiidae	Cerastoderma	<i>Cerastoderma edule</i>	Common edible cockle	5.6	0.62	10	0.101 (0.032-0.243)	0.258 (0.071-0.653)
Cardiida	Cardiidae	Clinocardium	<i>Clinocardium nuttallii</i>	Basket cockle	14	0.1525	7	0.046 (0.003-0.208)	0.118 (0.008-0.533)
Cardiida	Cardiidae	Dallocardia	<i>Dallocardia muricata</i>	American yellow cockle	6	0.1525	26.5	0.022 (0.001-0.11)	0.055 (0.002-0.277)
Cardiida	Donacidae	Donax	<i>Donax dentifer</i>	Toothed donax	3.05	0.62	26.5	0.037 (0.005-0.143)	0.092 (0.011-0.374)
Cardiida	Donacidae	Donax	<i>Donax obesulus</i>	Common peruvian donax	3.9	1	26.5	0.071 (0.007-0.283)	0.178 (0.018-0.723)
Cardiida	Donacidae	Donax	<i>Donax trunculus</i>	Truncate donax	4.4	0.7	26.5	0.035 (0.006-0.114)	0.089 (0.015-0.298)
Cardiida	Psammobiidae	Hiatula	<i>Hiatula diphos</i>	Diphos sanguin	6	0.825	26.5	0.067 (0.017-0.192)	0.168 (0.041-0.478)

Cardiida	Cardiidae	Hippopus	<i>Hippopus hippopus</i>	Bear paw clam	50	0.14	26.5	0.022 (0-0.124)	0.056 (0.001-0.311)
Cardiida	Cardiidae	Laevicardium	<i>Laevicardium crassum</i>	Norwegian egg cockle	7.5	0.1525	26.5	0.021 (0.001-0.111)	0.052 (0.002-0.268)
Cardiida	Semelidae	Scrobicularia	<i>Scrobicularia plana</i>	Peppery furrow	6.5	0.36	8	0.096 (0.006-0.445)	0.242 (0.013-1.126)
Cardiida	Semelidae	Semele	<i>Semele solida</i>	Chilean seumele	3.035	0.297	12	0.068 (0.004-0.332)	0.171 (0.01-0.84)
Cardiida	Solecurtidae	Tagelus	<i>Tagelus dombeii</i>	Dombey's tagelus	7.8	0.4	26.5	0.035 (0.002-0.165)	0.088 (0.005-0.414)
Cardiida	Cardiidae	Tridacna	<i>Tridacna crocea</i>	Crocus giant clam	15	0.165	26.5	0.02 (0.001-0.111)	0.051 (0.002-0.288)
Cardiida	Cardiidae	Tridacna	<i>Tridacna derasa</i>	Smooth giant clam	60	0.109	26.5	0.025 (0-0.171)	0.062 (0-0.404)
Cardiida	Cardiidae	Tridacna	<i>Tridacna gigas</i>	Giant clam	137	0.07	26.5	5.402 (0-0.994)	12.555 (0-2.478)
Cardiida	Cardiidae	Tridacna	<i>Tridacna maxima</i>	Elongate giant clam	41.7	0.235	26.5	0.022 (0-0.136)	0.055 (0.001-0.336)
Cardiida	Cardiidae	Tridacna	<i>Tridacna squamosa</i>	Fluted giant clam	45	0.165	26.5	0.022 (0-0.128)	0.055 (0.001-0.325)
Limida	Limidae	Lima	<i>Lima lima</i>	Spiny file shell	9	0.43	17	0.067 (0.004-0.301)	0.166 (0.01-0.747)
Limida	Limidae	Limaria	<i>Limaria hians</i>	Limaria hians	0.605	0.43	17	0.075 (0.004-0.373)	0.188 (0.011-0.89)
Myida	Myidae	Mya	<i>Mya arenaria</i>	Sand gaper	10	0.3	10	0.055 (0.015-0.146)	0.14 (0.034-0.397)
Mytilida	Mytilidae	Choromytilus	<i>Choromytilus chorus</i>	Choro mussel	26	0.58	12	0.119 (0.009-0.531)	0.296 (0.022-1.281)
Mytilida	Mytilidae	Geukensia	<i>Geukensia demissa</i>	Atlantic ribbed mussel	12	0.26	16	0.065 (0.005-0.284)	0.161 (0.011-0.673)
Mytilida	Mytilidae	Lithophaga	<i>Lithophaga lithophaga</i>	European date mussel	5.6	0.044	16	0.052 (0.003-0.255)	0.131 (0.007-0.622)
Mytilida	Mytilidae	Modiolus	<i>Modiolus barbatus</i>	Bearded horse mussel	6.611	0.1955	16	0.062 (0.004-0.275)	0.152 (0.01-0.698)
Mytilida	Mytilidae	Mytella	<i>Mytella guyanensis</i>	Guyana swamp mussel	6	0.128	18	0.052 (0.003-0.232)	0.129 (0.007-0.56)
Mytilida	Mytilidae	Mytella	<i>Mytella strigata</i>	Strigate mangrove mussel	6	0.128	18	0.052 (0.003-0.23)	0.131 (0.008-0.566)
Mytilida	Mytilidae	Mytilus	<i>Mytilus californianus</i>	Californian mussel	25.5	0.25	15	0.034 (0.015-0.061)	0.088 (0.034-0.169)
Mytilida	Mytilidae	Mytilus	<i>Mytilus chilensis</i>	Chilean mussel	18	0.25	12	0.06 (0.032-0.111)	0.149 (0.081-0.268)
Mytilida	Mytilidae	Mytilus	<i>Mytilus coruscus</i>	Korean mussel	10.5	0.25	15	0.053 (0.012-0.143)	0.132 (0.029-0.351)
Mytilida	Mytilidae	Mytilus	<i>Mytilus edulis</i>	Blue mussel	11	0.24	8	0.078 (0.043-0.13)	0.195 (0.113-0.318)
Mytilida	Mytilidae	Mytilus	<i>Mytilus galloprovincialis</i>	Mediterranean mussel	16.5	0.26	17	0.042 (0.026-0.064)	0.105 (0.061-0.17)
Mytilida	Mytilidae	Mytilus	<i>Mytilus planulatus</i>	Australian mussel	6	0.25	26	0.034 (0.006-0.115)	0.084 (0.014-0.283)
Mytilida	Mytilidae	Mytilus	<i>Mytilus platensis</i>	River Plata mussel	9	0.38	14	0.07 (0.016-0.187)	0.174 (0.038-0.444)
Mytilida	Mytilidae	Perna	<i>Perna canaliculus</i>	New Zealand mussel	15	0.6	26	0.064 (0.016-0.18)	0.156 (0.042-0.43)
Mytilida	Mytilidae	Perna	<i>Perna perna</i>	South American rock mussel	17	0.13	26	0.037 (0.003-0.172)	0.091 (0.008-0.418)
Mytilida	Mytilidae	Perna	<i>Perna viridis</i>	Green mussel	16.5	1.07	26	0.122 (0.042-0.287)	0.299 (0.114-0.657)
Ostreida	Pinnidae	Atrina	<i>Atrina maura</i>	Maura pen shell	29.75	0.77	20	0.109 (0.006-0.526)	0.269 (0.014-1.26)
Ostreida	Ostreidae	Crassostrea	<i>Crassostrea corteziensis</i>	Cortez oyster	25	1.09	27	0.142 (0.02-0.517)	0.347 (0.051-1.17)
Ostreida	Ostreidae	Crassostrea	<i>Crassostrea rhizophorae</i>	Mangrove cupped oyster	12	2.79	27	29.998 (0.018-169.971)	70.492 (0.047-391.851)
Ostreida	Ostreidae	Crassostrea	<i>Crassostrea tulipa</i>	Gasar cupped oyster	25	0.845	27	0.09 (0.016-0.289)	0.22 (0.039-0.691)
Ostreida	Ostreidae	Crassostrea	<i>Crassostrea virginica</i>	American cupped oyster	30	0.565	24	0.054 (0.021-0.115)	0.135 (0.055-0.281)
Ostreida	Ostreidae	Magallana	<i>Magallana bilineata</i>	Slipper cupped oyster	20.88	1	28	0.129 (0.021-0.433)	0.31 (0.055-0.988)
Ostreida	Ostreidae	Magallana	<i>Magallana gigas</i>	Pacific cupped oyster	45	0.68	13	0.123 (0.066-0.213)	0.303 (0.189-0.464)
Ostreida	Ostreidae	Magallana	<i>Magallana sikamea</i>	Kumamoto oyster	6	0.84	20.5	0.186 (0.025-0.67)	0.449 (0.064-1.496)
Ostreida	Ostreidae	Ostrea	<i>Ostrea conchaphila</i>	Olympia oyster	9	0.7625	14.5	0.228 (0.013-1.04)	0.557 (0.033-2.498)
Ostreida	Margaritidae	Pinctada	<i>Pinctada maxima</i>	Silverlip pearl oyster	30	0.74	22	0.09 (0.005-0.417)	0.219 (0.012-1.014)
Ostreida	Margaritidae	Pinctada	<i>Pinctada radiata</i>	Rayed pearl oyster	10.05	0.414	22	0.064 (0.004-0.315)	0.158 (0.009-0.753)
Ostreida	Pteriidae	Pteria	<i>Pteria penguin</i>	Penguin wing oyster	30	0.69	22	0.08 (0.004-0.375)	0.199 (0.01-0.904)
Ostreida	Ostreidae	Saccostrea	<i>Saccostrea cucullata</i>	Hooded oyster	20	0.7625	24	0.148 (0.021-0.491)	0.362 (0.052-1.147)
Pectinida	Pectinidae	Aequipecten	<i>Aequipecten opercularis</i>	Queen scallop	11	0.645	12	0.094 (0.008-0.413)	0.231 (0.02-0.999)
Pectinida	Pectinidae	Argopecten	<i>Argopecten purpuratus</i>	Peruvian calico scallop	12	1.995	21	1.42 (0.01-8.773)	3.459 (0.026-21.509)

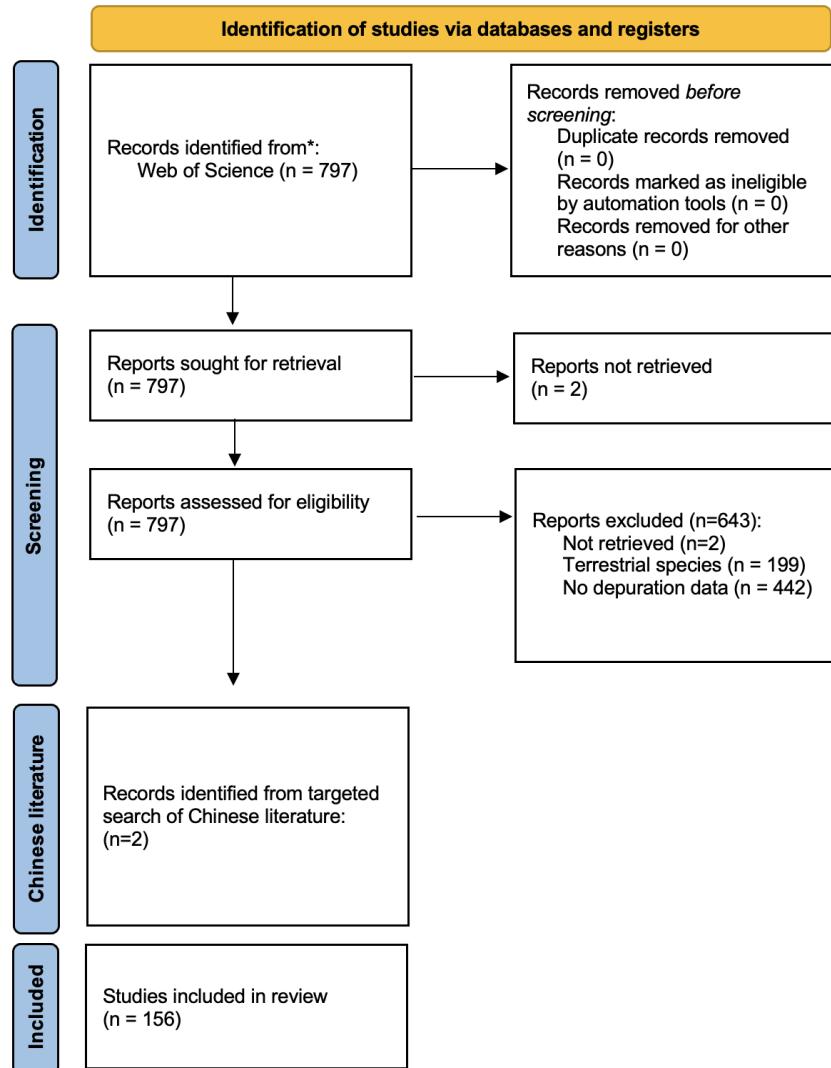
Pectinida	Pectinidae	Argopecten	<i>Argopecten ventricosus</i>	Pacific calico scallop	10	2.1	26	1.388 (0.008-8.634)	3.322 (0.021-21.089)
Pectinida	Pectinidae	Chlamys	<i>Chlamys islandica</i>	Iceland scallop	11	0.139	8	0.054 (0.004-0.257)	0.135 (0.01-0.617)
Pectinida	Pectinidae	Flexopecten	<i>Flexopecten glaber</i>	Smooth scallop	8.66	0.5035	16	0.059 (0.005-0.243)	0.147 (0.013-0.602)
Pectinida	Pectinidae	Mizuhopecten	<i>yessoensis</i>	Yesso scallop	25	0.925	18	0.04 (0.017-0.081)	0.101 (0.043-0.205)
Pectinida	Pectinidae	Nodipecten	<i>Nodipecten nodosus</i>	Lion's paw	15	0.5035	16	0.048 (0.007-0.181)	0.118 (0.018-0.421)
Pectinida	Pectinidae	Patinopecten	<i>Patinopecten caurinus</i>	Weathervane scallop	28	0.413	8	0.069 (0.006-0.306)	0.173 (0.014-0.754)
Pectinida	Pectinidae	Pecten	<i>Pecten fumatus</i>	Southern Australia scallop	9.3	0.5	16	0.059 (0.005-0.249)	0.146 (0.013-0.607)
Pectinida	Pectinidae	Pecten	<i>Pecten jacobaeus</i>	Great Mediterranean scallop	25	0.5	20	0.041 (0.003-0.178)	0.102 (0.008-0.426)
Pectinida	Pectinidae	Pecten	<i>Pecten maximus</i>	Great Atlantic scallop	17	0.475	12	0.065 (0.006-0.278)	0.162 (0.015-0.687)
Pectinida	Pectinidae	Placopecten	<i>magellanicus</i>	American sea scallop	20	0.28	8	0.013 (0.006-0.024)	0.034 (0.014-0.07)
Pectinida	Spondylidae	Spondylus	<i>Spondylus americanus</i>	Atlantic thorny oyster	11.2	0.5	16	0.07 (0.005-0.325)	0.175 (0.012-0.763)
Pectinida	Spondylidae	Spondylus	<i>crassisquama</i>	Pacific thorny oyster	8.85	0.5	16	0.074 (0.005-0.341)	0.184 (0.012-0.822)
Pectinida	Pectinidae	Zygochlamys	<i>Zygochlamys delicatula</i>	Delicate scallop	7.8	0.187	13	0.045 (0.003-0.203)	0.112 (0.008-0.495)
Venerida	Arcticidae	Arctica	<i>Arctica islandica</i>	Ocean quahog	13	0.0605	8	0.056 (0.003-0.28)	0.138 (0.008-0.669)
Venerida	Veneridae	Austrovenus	<i>Austrovenus stutchburyi</i>	Stutchbury's venus	4.9	0.3115	15	0.057 (0.005-0.231)	0.141 (0.011-0.573)
Venerida	Veneridae	Callista	<i>Callista chione</i>	Smooth callista	11	0.24	12	0.04 (0.008-0.122)	0.102 (0.02-0.319)
Venerida	Veneridae	Chamelea	<i>Chamelea gallina</i>	Striped venus	5	0.415	14	0.045 (0.009-0.135)	0.113 (0.022-0.352)
Venerida	Veneridae	Cyclina	<i>Cyclina sinensis</i>	Oriental cyclina	5	0.421	16	0.063 (0.005-0.261)	0.157 (0.013-0.612)
Venerida	Veneridae	Dosinia	<i>Dosinia exoleta</i>	Mature dosinia	4.615	0.448	16	0.065 (0.006-0.265)	0.16 (0.014-0.637)
Venerida	Veneridae	Gafrarium	<i>Gafrarium tumidum</i>	Tumid venus	4	0.32565	16	0.054 (0.005-0.213)	0.133 (0.011-0.52)
Venerida	Veneridae	Ilioichione	<i>Ilioichione subrugosa</i>	Semi-rough venus	4.485	0.421	16	0.064 (0.006-0.265)	0.159 (0.014-0.627)
Venerida	Veneridae	Leukoma	<i>Leukoma staminea</i>	Pacific littleneck clam	7.5	0.21105	8	0.07 (0.006-0.295)	0.174 (0.014-0.718)
Venerida	Veneridae	Leukoma	<i>Leukoma thaca</i>	Taca clam	8	0.174	19	0.036 (0.003-0.154)	0.089 (0.007-0.372)
Venerida	Mactridae	Lutraria	<i>Lutraria magna</i>	Oblong otter shell	5.115	0.1975	11	0.043 (0.003-0.198)	0.107 (0.007-0.493)
Venerida	Mactridae	Mactra	<i>Mactra quadrangularis</i>	Globose clam	6.05	0.15	11	0.04 (0.003-0.188)	0.099 (0.006-0.461)
Venerida	Mactromeris	Mactromeris	<i>polynyma</i>	Stimpson's surf clam	16	0.0801	4	0.05 (0.003-0.239)	0.124 (0.007-0.591)
			<i>Mercenaria</i>						
Venerida	Veneridae	Mercenaria	<i>campechiensis</i>	Southern hardshell clam	13	0.64	17	0.149 (0.017-0.47)	0.363 (0.041-1.081)
Venerida	Veneridae	Mercenaria	<i>Mercenaria mercenaria</i>	Northern quahog(=Hard clam)	13	0.3257	17	0.102 (0.037-0.225)	0.248 (0.106-0.498)
Venerida	Veneridae	Meretrix	<i>Meretrix lusoria</i>	Japanese hard clam	5	1.26	17	0.34 (0.011-1.774)	0.828 (0.028-4.243)
Venerida	Mesodesmatidae	Mesodesma	<i>Mesodesma donacium</i>	Macha clam	7	1.13	17	0.232 (0.009-1.229)	0.569 (0.022-2.981)
Venerida	Mesodesmatidae	Paphies	<i>Paphies australis</i>	Pipi wedge clam	8	0.16	20	0.036 (0.002-0.178)	0.089 (0.005-0.432)
Venerida	Veneridae	Polititapes	<i>Polititapes aureus</i>	Golden carpet shell	6	0.421	12	0.08 (0.007-0.348)	0.198 (0.017-0.816)
Venerida	Veneridae	Polititapes	<i>Polititapes rhombooides</i>	Banded carpet shell	6	0.421	12	0.08 (0.007-0.332)	0.197 (0.018-0.794)
Venerida	Veneridae	Ruditapes	<i>Ruditapes decussatus</i>	Grooved carpet shell	8	0.48	17	0.033 (0.011-0.087)	0.082 (0.028-0.198)
Venerida	Veneridae	Ruditapes	<i>Ruditapes philippinarum</i>	Japanese carpet shell	8	0.52	18	0.031 (0.015-0.058)	0.075 (0.042-0.122)
Venerida	Veneridae	Saxidomus	<i>Saxidomus gigantea</i>	Butter clam	13	0.421	7	0.103 (0.007-0.439)	0.255 (0.019-1.057)
Venerida	Mactridae	Spisula	<i>Spisula murchisoni</i>	Large trough shell	5	0.3307	12.5	0.018 (0.003-0.079)	0.043 (0.007-0.192)
Venerida	Mactridae	Spisula	<i>Spisula sachalinensis</i>	Imperial surf clam	5	0.3307	18	0.013 (0.002-0.063)	0.032 (0.005-0.149)
Venerida	Mactridae	Spisula	<i>Spisula solida</i>	Solid surf clam	5	0.3307	11	0.01 (0.004-0.022)	0.024 (0.01-0.051)
Venerida	Mactridae	Spisula	<i>Spisula subtruncata</i>	Subtruncate surf clam	3	0.67	12.5	0.033 (0.004-0.152)	0.079 (0.011-0.36)

Venerida	Veneridae	Tawera	<i>Tawera elliptica</i>	Gay's little venus	2.803	0.288	12	0.066 (0.006-0.284)	0.163 (0.014-0.682)
Venerida	Veneridae	Tivela	<i>Tivela mactroides</i>	Triangular tivela	3.4	0.15	27	0.027 (0.001-0.132)	0.068 (0.003-0.32)
Venerida	Mactridae	Tresus	<i>Tresus nuttallii</i>	Pacific horse clam	25.4	0.153	11	0.035 (0.002-0.168)	0.087 (0.004-0.422)
Venerida	Veneridae	Venerupis	<i>Venerupis corrugata</i>	Corrugated venus	7.7	0.226	13	0.053 (0.005-0.225)	0.133 (0.011-0.535)
Venerida	Veneridae	Venus	<i>Venus casina</i>	Chamber venus	5	0.26	19	0.043 (0.004-0.183)	0.106 (0.008-0.442)
Venerida	Veneridae	Venus	<i>Venus verrucosa</i>	Warty venus	7	0.26	19	0.042 (0.003-0.176)	0.103 (0.009-0.434)

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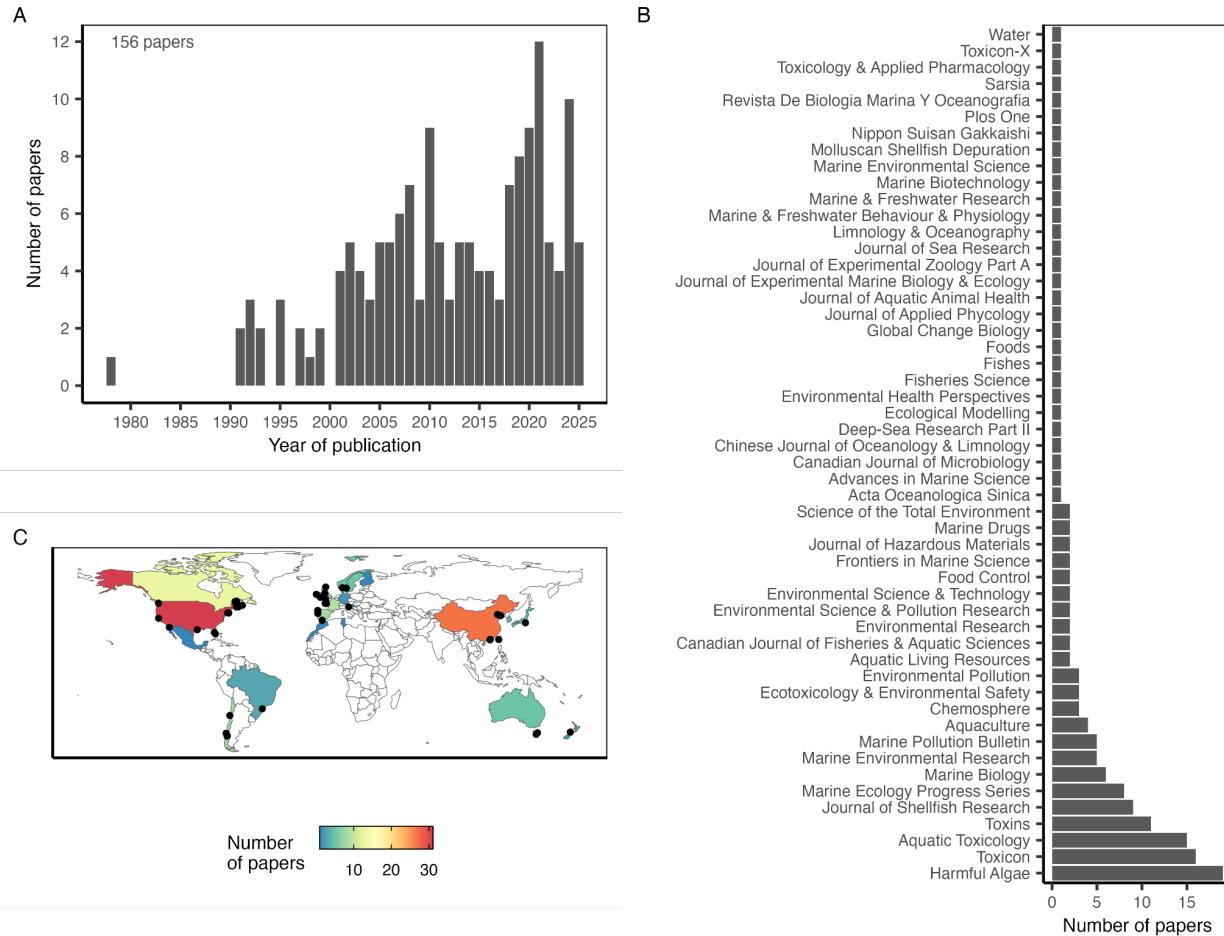
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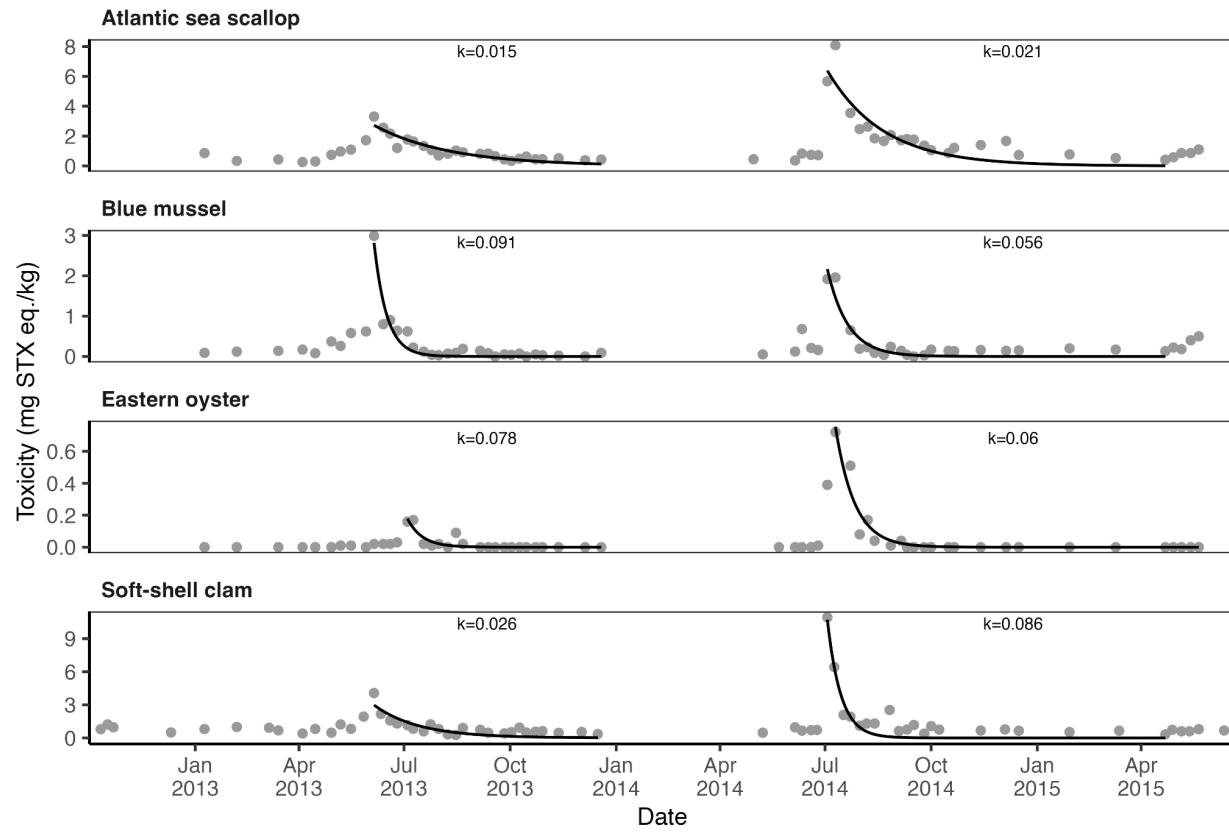
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1253 **Figure S1.** PRISMA 2020 flow diagram detailing the literature review inclusion criteria.



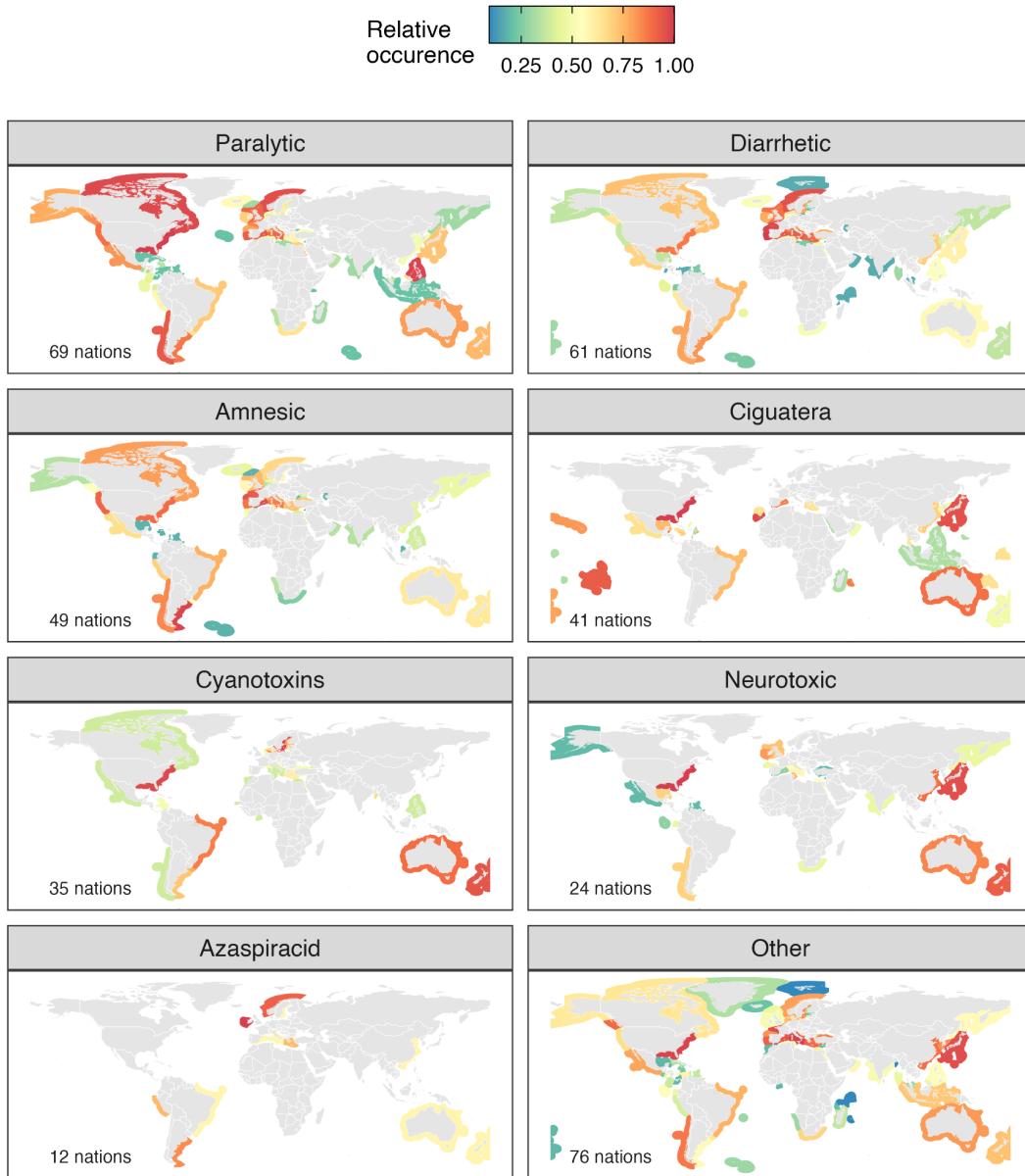
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Figure S2. The number of papers measuring marine biotoxin depuration rates (**A**) over time, (**B**) by journal; and (**C**) by country of the lead author's primary affiliation. In (**C**), points mark locations where depuration rates have been quantified from field monitoring data.



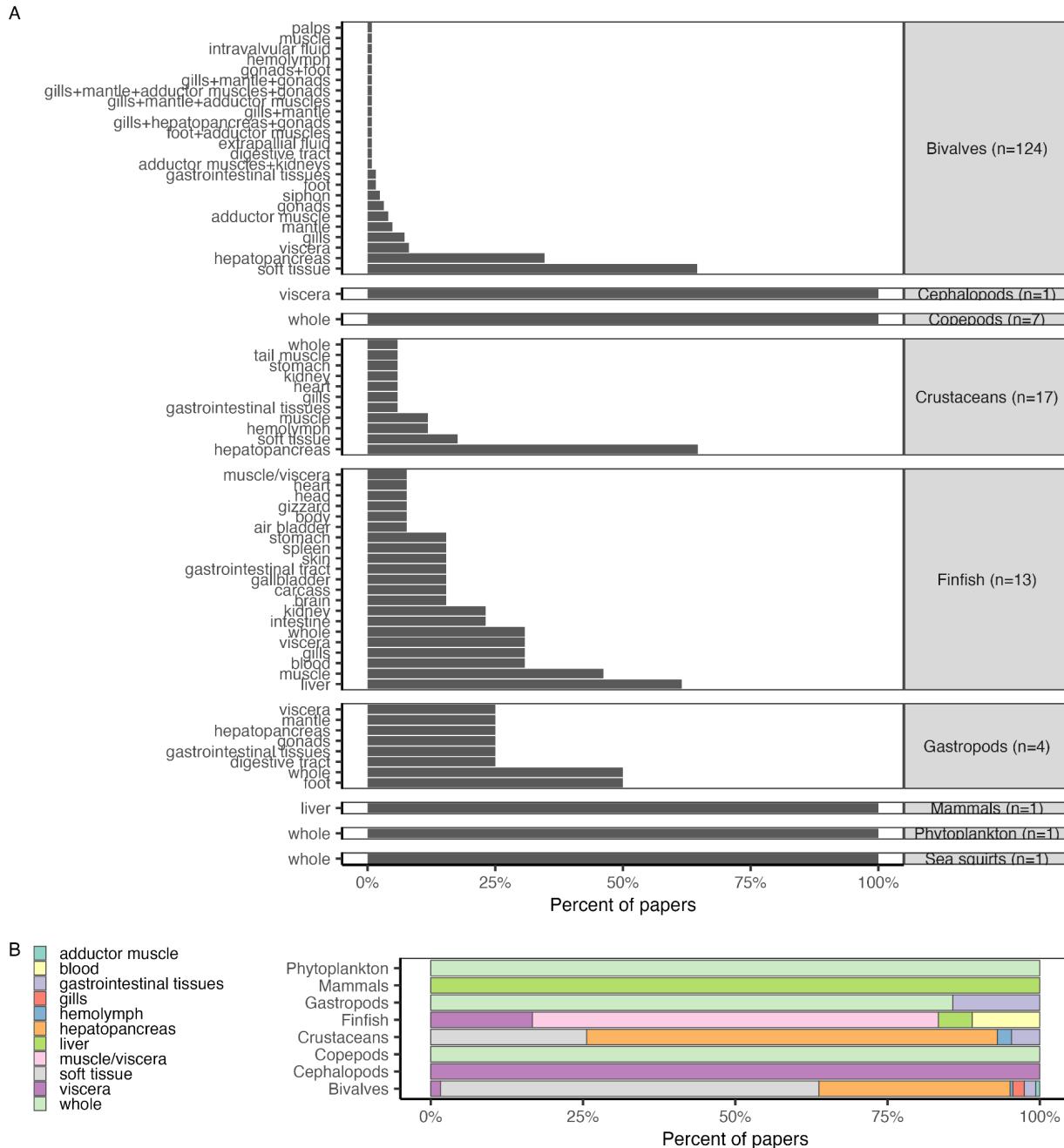
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Figure S3. An illustration of the methods for estimating paralytic shellfish toxin (PST) depuration rates from biotoxin monitoring data on four shellfish species from Deadmans Harbour, New Brunswick, Canada. Data are from (Rourke et al., 2021). The black line shows the fit of a one-compartment depuration model to the depuration phase of annual toxin events; the exponential decay constant (k) associated with each curve is printed above the curve.



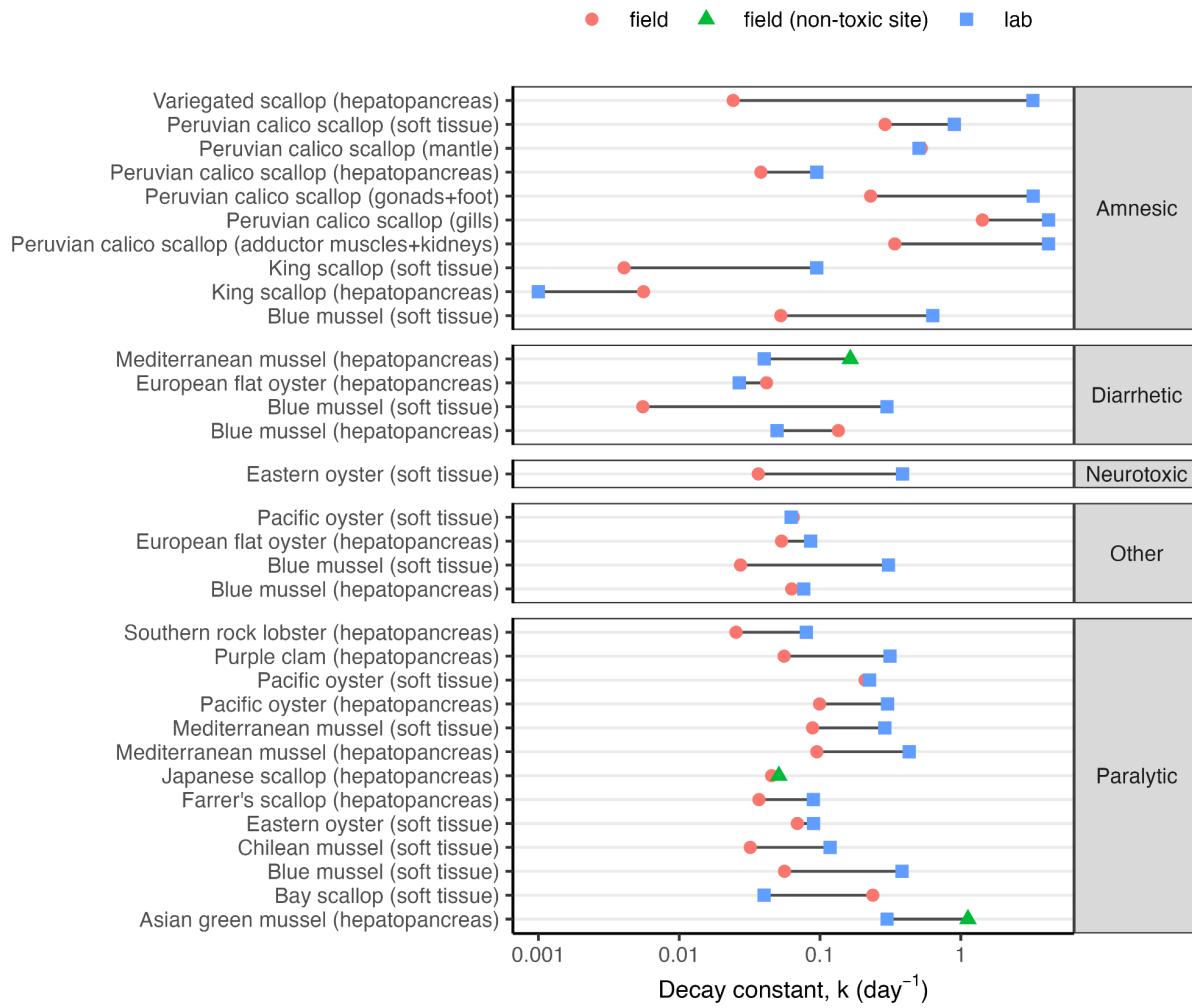
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Figure S4. Exclusive economic zones (EEZs) exposed to harmful algae and their associated public health risks. Shaded EEZs have HAB species present based on OBIS. Syndromes are sorted by the number of EEZs with observations of HAB species; the number of EEZs impacted (out of 257) is printed in the bottom right.



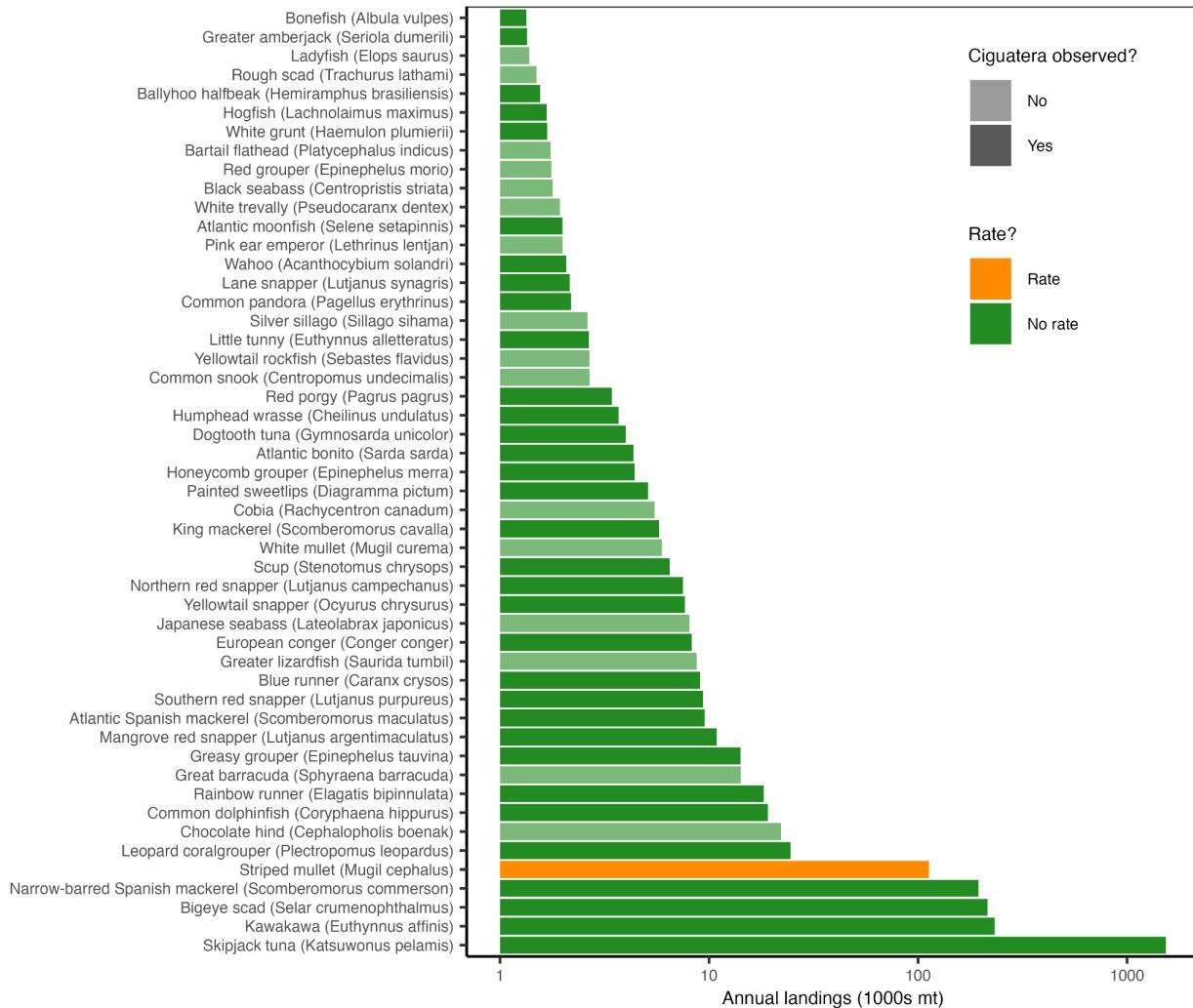
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Figure S5. Panel A shows the frequency with which different tissues are evaluated for biotoxin depuration rates by taxonomic class. The x-axis represents the percent of papers on species within each class evaluating depuration rates for each tissue. The number of papers on species within each class is printed in the class label. Tissues are ordered in increasing frequency (bottom to top). Panel B shows the frequency with which different tissues are evaluated for biotoxin depuration rates by taxonomic class in papers in which only a single tissue is evaluated.



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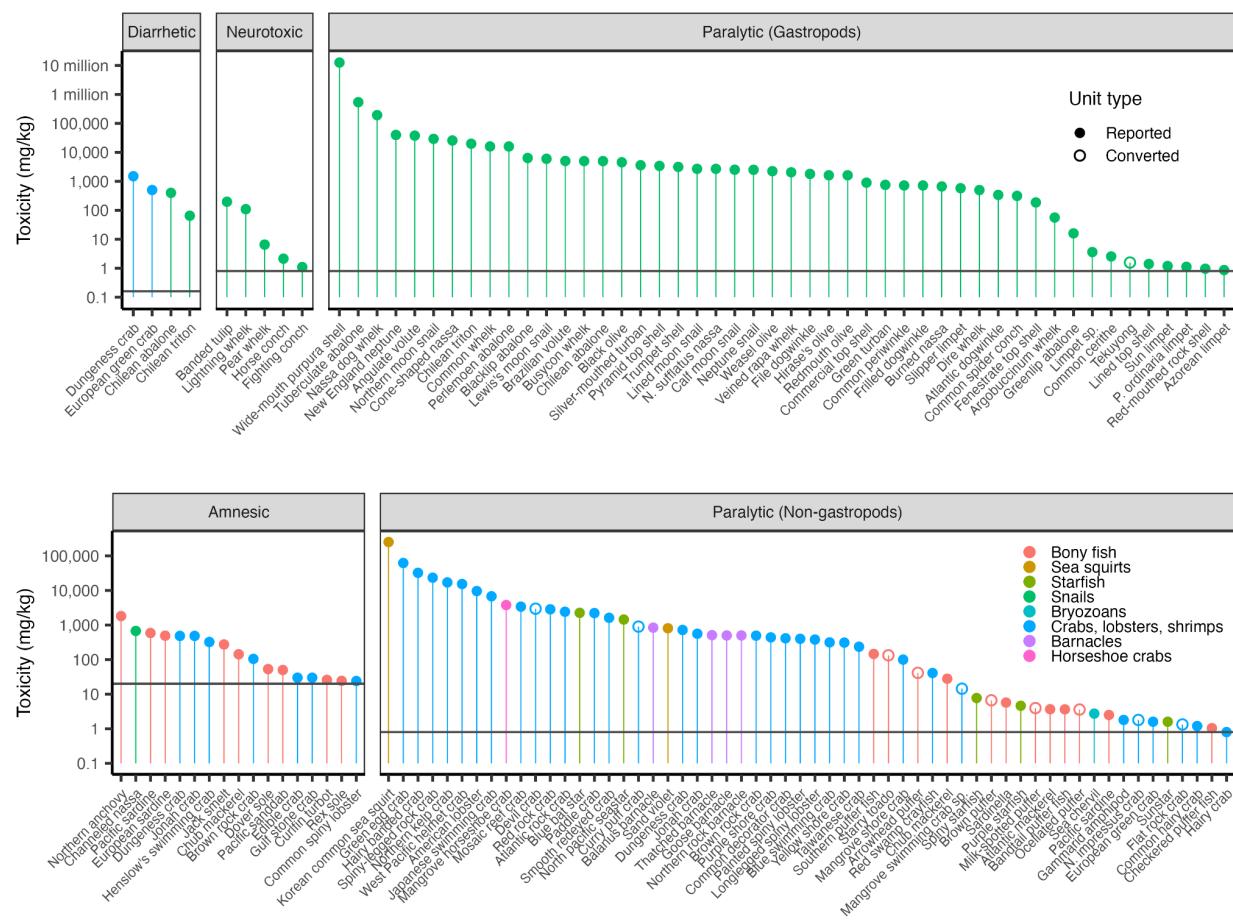
1279 **Figure S6.** A comparison of average depuration rates in the field versus the lab by species,
 1280 tissue, and toxin. In general, depuration is faster in the lab than in the field.



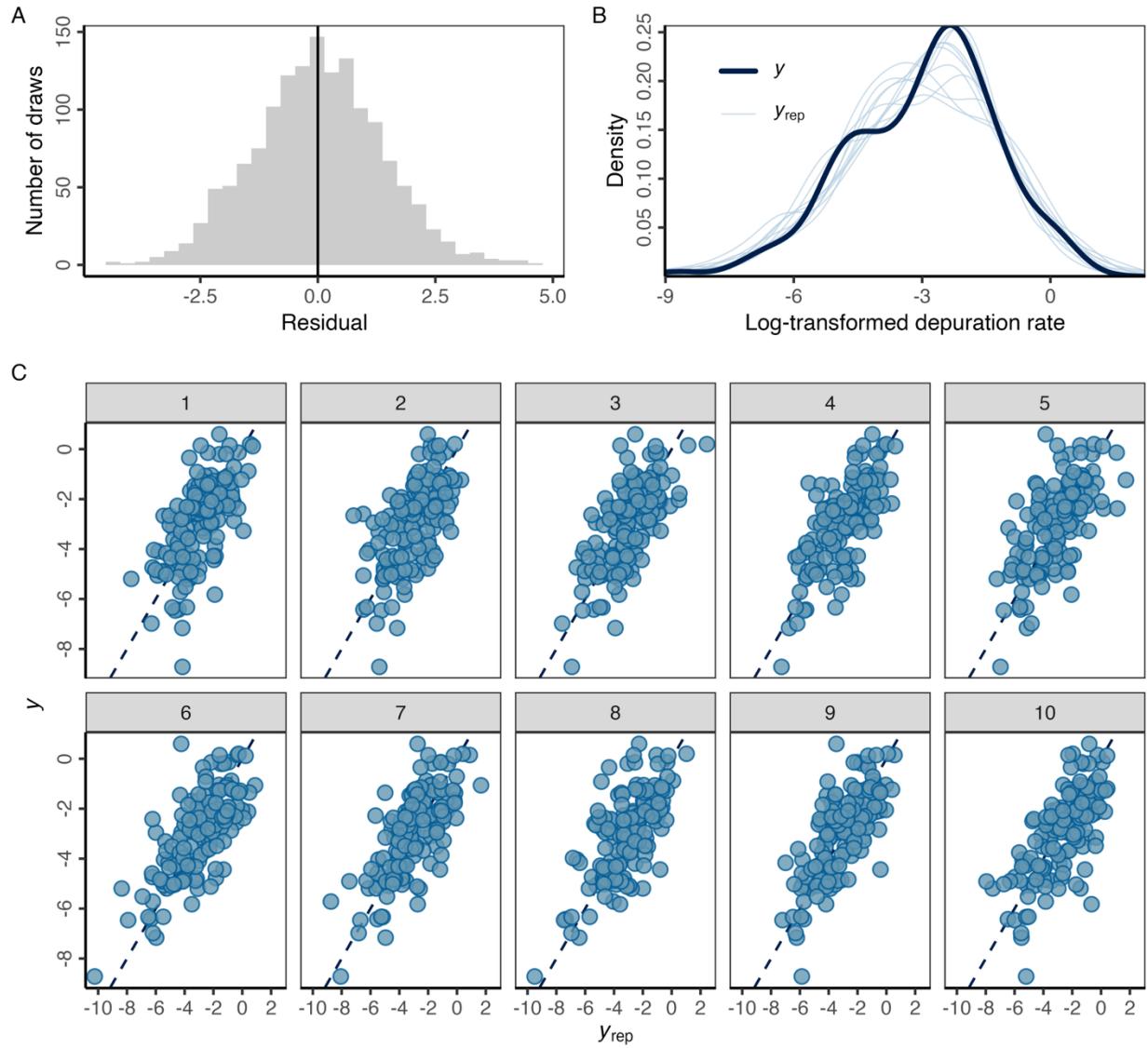
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1283 **Figure S7.** The top-50 marine finfish vulnerable to ciguatera most frequently landed by fisheries
 1284 from 2014-2023 from countries with known ciguatera occurrences. Marine finfish vulnerable to
 1285 ciguatera were identified as those with reported ciguatera occurrences (known) and large (>25
 1286 cm max length), reef-associated, non-herbivorous marine finfish speculated to be vulnerable to
 1287 ciguatera. Ciguatera depuration rates have not been studied for any of these species.

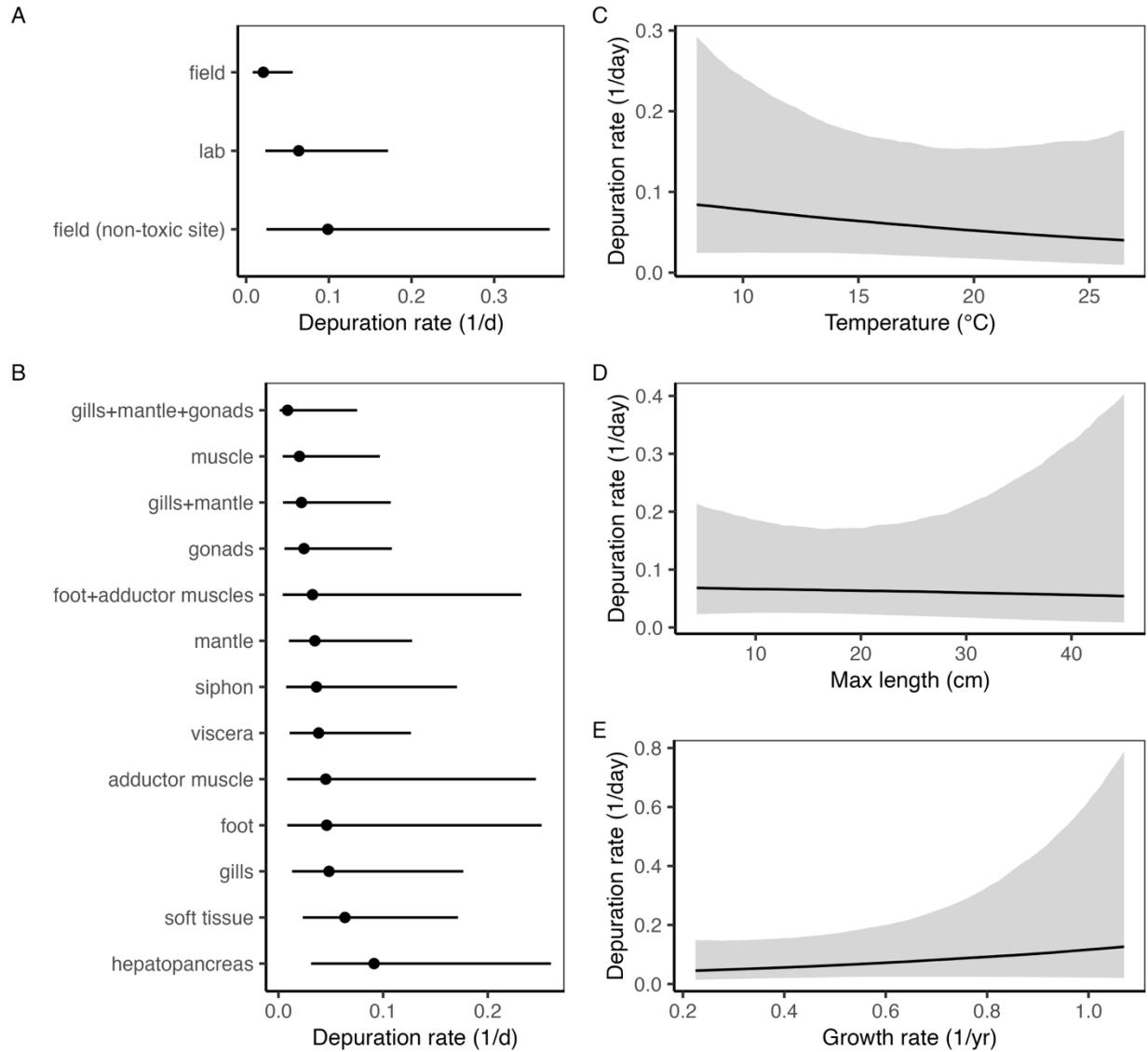


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Figure S9. Model diagnostic plots for the best performing Bayesian regression model showing (A) the distribution of the residuals in 10 posterior draws; (B) distribution of the response variable in the data (y) versus 10 posterior draws (y_{rep}); and (C) correlation between the response variable in the data (y) versus 10 posterior draws (y_{rep}). In (C), the diagonal line represents the one-to-one line and each facet represents a set of posterior draws.



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Figure S10. The conditional effects of the **(A)** location; **(B)** tissue, **(C)** preferred temperature, **(D)** maximum length, and **(E)** von Bertalanffy growth rate fixed effects variables included in the best performing Bayesian regression model. Conditional effects illustrate the depuration rate expected for each fixed effect value when other fixed and random effects are held at their average. In **(A)** and **(B)**, points represent the median and lines represent the 95% credible interval. In **(C-D)**, lines represent the median and shading indicates the 95% credible interval.