

**SUMMARY FIGURES OF DIET DATA FROM BIRDS ON THE
ALASKA MARITIME NATIONAL WILDLIFE REFUGE**



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Key words: *Aethia cristatella*, *Aethia psittacula*, *Aethia pusilla*, *Aethia pygmaea*, black-legged kittiwake, black oystercatcher, Cassin's auklet, *Cerorhinca monocerata*, common murre, crested auklet, food habits, fork-tailed storm-petrel, *Fratercula cirrhata*, *Fratercula corniculata*, glaucous-winged gull, *Haematopus bachmani*, horned puffin, *Larus glaucescens*, Leach's storm-petrel, least auklet, *Oceanodroma furcata*, *Oceanodroma leucorhoa*, parakeet auklet, pelagic cormorant, *Phalacrocorax urile*, *Phalacrocorax pelagicus*, *Ptychoramphus aleuticus*, red-faced cormorant, red-legged kittiwake, rhinoceros auklet, *Rissa brevirostris*, *Rissa tridactyla*, thick-billed murre, tufted puffin, *Uria aalge*, *Uria lomvia*, whiskered auklet.

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TABLE OF CONTENTS**Page**

INTRODUCTION.....	1
METHODS	1
ACKNOWLEDGMENTS.....	3
REFERENCES.....	3
LIST OF DIET DATASETS	6
MAP.....	26
DIET FIGURES	27
Fork-tailed storm-petrel	28
Chick diet	28
Leach's storm-petrel	30
Chick diet	30
Red-faced cormorant.....	32
Adult diet.....	32
Chick diet.....	32
Pelagic cormorant.....	34
Chick diet	34
Black oystercatcher	35
Chick diet	35
Common murre.....	36
Adult diet.....	36
Chick diet	40
Thick-billed murre	42
Adult diet.....	42
Chick diet	44
Cassin's auklet.....	46
Chick diet	46
Parakeet auklet.....	47
Chick diet	47
Least auklet	49
Chick diet	49
Whiskered auklet.....	51
Chick diet	51
Crested auklet.....	52
Chick diet	52
Rhinoceros auklet.....	54
Chick diet	54
Horned puffin	57
Chick diet	57
Tufted puffin.....	60
Adult diet	60
Chick diet	62
Black-legged kittiwake	68
Adult and chick diet.....	68
Red-legged kittiwake	72
Adult and chick diet.....	72
Glaucous-winged gull	74
Adult diet	74
Chick diet	77
APPENDICES	79
Comprehensive list of prey items	79

INTRODUCTION

The Alaska Maritime National Wildlife Refuge (AMNWR) comprises 3.4 million acres of islands and coastline across the Gulf of Alaska and Bering and Chukchi seas and provides breeding habitat for more than 40 million seabirds. A major objective of the refuge is to collect baseline status and trend information for a suite of seabird species; these data include timing of breeding, reproductive performance, chick growth, population trends, survival, and diet. By relating these parameters to environmental conditions, ecosystem processes may be better understood.

Seabird diet in particular may be a valuable indicator of marine conditions, as seabirds have high energy requirements that make them especially sensitive to changes in the environment that affect prey availability and abundance (Piatt et al. 2007). With seabird diet data from many years across a broad geographic region, we can examine changes in the lower trophic levels of the marine ecosystem and explore how those changes may have consequences for populations of seabirds and other organisms.

We present a brief summary of diet data from birds (mostly seabirds, with some limited data from shorebirds and waterfowl) collected at AMNWR sites from 1975-2015, comprising summary figures from a more detailed diet summary of all refuge data (Drummond 2016). This represents the refuge's most current diet dataset to date (excluding some raptor diet historically collected on the refuge); however, diet collection is still ongoing, primarily at annual monitoring sites, and additional diet data will exist in future years.

METHODS

i. Diet sample collection

Diet samples were collected from birds at numerous AMNWR sites from 1975 to 2015 (diet collection is still ongoing, primarily at annual monitoring sites, and additional diet data will exist in future years). Samples were collected by a mix of refuge staff and research partners, both as part of the refuge's annual monitoring program and as specific short-term research projects. Collection techniques varied greatly across different species (Table 1) and over time; sampling in earlier years consisted primarily of shooting birds while more recent years emphasized non-lethal sampling methods (e.g., collecting regurgitations).

ii. Prey identification

Samples were either identified immediately in the field or preserved (ethanol, isopropanol, formalin, Streck Tissue Fixative, or frozen) and sent to a laboratory for later analysis. Prey in samples was identified to the lowest taxonomic level possible (often to species but sometimes only to genus, family, order, etc.; for a complete list of all prey items ever found, see Appendices A-E). Identification follows the Integrated Taxonomic Information System (ITIS) when possible. During identification, lab analysts recorded some or all of the following data when possible:

- (a) mass of entire sample
- (b) counts of prey items (rarely, no count was made and only "presence" recorded)
- (c) mass, various length measurements, sex, and life stage of individual prey items
- (d) length measurements of individual otoliths and squid beaks
- (e) percent total mass, percent total volume, and displacement volume of prey items in sample
- (f) indices of condition of prey items and relative amount of digestion

Some samples were identified in their entirety (every prey item in the sample identified), and some were sub-sampled to various levels with final prey numbers then calculated by the appropriate correction factor.

Because samples were collected across such a long time period and from so many different seabird species, the diet dataset has some unavoidable biases. Firstly, detection of different types of prey probably varied by how the sample was collected. For example, stomach samples consist mainly of hard parts (otoliths and squid beaks) left after digestion and probably vastly underestimate presence of soft-bodied zooplankton compared to relatively-undigested regurgitation and bill load samples. Secondly, the ability of analysts to identify prey items to the lowest taxonomic level varied both with skill level of different analysts and the condition of the sample (in some years, samples were identified soon after collection, whereas in other years there was a 5-10 year wait for samples to be identified).

iii. Diet data summary

We quantified diet data in four different ways. For all species we calculated both frequency of occurrence and percent composition of prey items. Frequency of occurrence is the percentage of samples each year in which each prey item is present, based simply on presence or absence. Total values of frequency occurrence of all prey items often sums to more than 100% in a given year because multiple prey types can be present in a single sample. In contrast, percent composition is based on the counts of prey items and is calculated as the percentage of the total number individual prey items comprised by each prey item each year (sums to 100% each year).

For puffin and rhinoceros auklet chick diet, which consists of whole, undigested fish, we calculated a third diet index using mass of prey items. Relative biomass is the percentage of the mass of the sample comprised by each prey item (sums to 100% each year). Biomass values for samples with partially or entirely digested prey (e.g., stomach samples or kittiwake and storm-petrel regurgitations) and primarily zooplankton (e.g., auklets) are more difficult to calculate because in most cases we do not have mass data for each individual prey item. It is possible to reconstruct an index of biomass using a mass standard for each prey species and we hope to do this in the future.

For gull pellets, we calculated an additional diet index based on the relative volume of made up by each prey item in a pellet. Percent volume is the average percent composition by volume of a prey item in all pellets (sums to 100% each year).

All AMNWR refuge diet data are housed in and summarized by an Access database. Some values may differ from historic presentations in reports, presumably due to corrections in previous calculations.

iv. Presentation

This report is a briefer summary of diet data extracted from a more detailed diet summary of refuge data (Drummond 2016). Data in figures are grouped at higher taxonomic levels to allow generalized summary across sites and years (groupings were chosen to highlight major diet items of each species). For detailed tables showing diet identified to the lowest taxonomic level possible, see the full report (Drummond 2016).

Due to the sheer enormity of these diet datasets (over 62,000 samples from 69 sites and 32 species), for this report we had to limit the scope of our presentation. We chose to only present figures and tables for those species and sites with at least 5 years of data or ongoing diet sampling. For a complete list of all refuge diet datasets that exist, including those that were not summarized here due to space constraints, see Tables 2-3 (these additional diet datasets can be obtained by contacting AMNWR biologists).

For most species, we separated adult and chick diet, as there is evidence that many seabird species feed chicks different prey than they eat themselves (e.g., Hunt et al. 1996, Pedrocchi et al. 1996, Daveron and Burger 1999, Fijn et al. 2012). For kittiwakes, however, it was often not possible to distinguish between chick and adult diet, given the recipient was not always recorded, adults store prey in their crops for several hours before regurgitating it to the young, and some sampling methods collected both stomach and regurgitation samples. Therefore, for black-legged and red-legged kittiwakes, we

lumped adult and chick diet together. This is consistent with previous publications on kittiwake diet (e.g., Decker et al., 1995; Hunt et al., 1996a; Sinclair et al., 2008, Renner et al. 2012), and indeed a study on black-legged kittiwakes in the Barents Sea found diets between adults and chicks did not differ significantly (Thorvaldsen et al. 2015).

This report is organized by seabird species in taxonomic order per the American Ornithologist Union (AOU), and within each species by geographic area from southeast Alaska west through the Alaska Peninsula and the Aleutian Islands, and then north through the Bering and Chukchi seas. In some figures and summary tables, different geographic units in the AMNWR are identified by colors.

v. Study sites

Diet data summarized in this report come from 20 sites across the AMNWR (Figure 1). These include all AMNWR annual monitoring sites (current: St. Lazaria, Barren Islands/East Amatuli, Chowiet, Aiktak, Buldir, St. George, St. Paul islands and Cape Lisburne; historic: Cape Thompson and Kasatochi Island), as well as some sites visited on an intermittent or opportunistic basis (Gull, Chisik, Suklik, Midun, Puffin, Egg, Bogoslof, Kiska, and St. Matthew islands). The Bluff site is not currently refuge land but is included here because the site is of biological importance and data were collected by refuge staff under a historic agreement between the refuge and landowners.

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None of these data would exist without the countless individuals who spent time collecting and analyzing these samples.

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Table 1. Types of diet data presented in this report.

Species	Diet sample collection technique	Diet recipient	Diet type
Storm-petrels	Adult shot at or near colony, stomach sample collected by dissection	Adult	Stomach
	Adult captured at colony with mist net or by hand when reaching into burrows, regurgitation sample collected	Chick	Regurgitation
	Chick captured at colony by hand reaching into burrows, regurgitation sample collected	Chick	Regurgitation
Cormorants	Adult shot at or near colony, stomach sample collected by dissection	Adult	Stomach
	Immature bird shot at or near colony, stomach sample collected by dissection	Immature	Stomach
	Bolus collected on ground under nest	Chick	Bolus
	Chick captured at colony by hand with ladder, regurgitation sample collected	Chick	Regurgitation
Murres	Adult shot at or near colony, stomach sample collected by dissection	Adult	Stomach
	Adult captured at colony with noose pole, stomach sample collected by lavage	Adult	Lavage
	Adult captured at colony with noose pole, stomach sample collected by forced regurgitation	Adult	Regurgitation
	Bill load observed from adult returning to colony to feed chick	Chick	Bill load
	Bill load collected from ground after dropped from adult returning to colony to feed chick	Chick	Bill load
	Bill load collected from bill from adult shot while returning to colony to feed chick	Chick	Bill load
	Chick collected at colony with noose pole or by hand with ladder or rock climbing; stomach sample collected by dissection	Chick	Stomach
Chick captured at colony with noose pole or by hand with ladder or rock climbing; regurgitation sample collected	Chick	Regurgitation	
Auklets	Adult shot, captured in mist net and collected, or found dead at or near colony, stomach sample collected by dissection	Adult	Stomach
	Adult shot at or near colony, regurgitation sample from gular pouch collected by dissection	Chick	Gular
	Adult captured at colony with mist net, noose carpets or other; regurgitation sample collected	Chick	Regurgitation
Puffins (includes RHAU)	Adult shot at or near colony, stomach sample collected by dissection	Adult	Stomach
	Bill load collected from bill from adult shot while returning to colony to feed chick	Chick	Bill load
	Chick found dead at colony, stomach sample collected by dissection	Chick	Stomach
	Bill load observed from adult returning to colony to feed chick	Chick	Bill load
	Bill load collected at nest after dropped by adult due to burrow screen, net, chick muzzle, fishing net, noose carpet or other	Chick	Bill load
Kittiwakes	Adult shot at or near colony, stomach sample collected by dissection	Adult	Stomach
	Adult captured at colony with noose pole or foot snare, stomach sample (and sometimes regurgitation) collected by lavage	Adult+Chick	Lavage
	Immature bird shot at or near colony, stomach sample collected by dissection	Immature	Stomach
	Adult captured at colony with noose pole, foot snare or mist net; regurgitation sample collected	Chick	Regurgitation
	Chick collected or found dead at colony, stomach sample collected by dissection	Chick	Stomach
	Chick captured at colony with noose pole, foot snare or by hand with ladder or rock climbing; regurgitation sample collected	Chick	Regurgitation
Gulls	Adult shot at or near colony, stomach sample collected by dissection	Adult	Stomach
	Regurgitated pellet collected from ground, left by adult	Adult	Pellet
	Chick captured by hand, regurgitation sample collected	Chick	Regurgitation
	Regurgitated bolus collected from nest, left by adult for chick	Chick	Bolus
Other species	Adult shot at or near colony, stomach sample collected by dissection (many species)	Adult	Stomach
	Prey remains collected at nest (black oystercatcher)	Chick	Prey pile
	Chick captured at colony, regurgitation sample collected (northern fulmar)	Chick	Regurgitation
	Bill load collected from ground or by burrow screen from adult returning to colony to feed chick (pigeon guillemot)	Chick	Bill load

Table 2. Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Common eider</u>					
Adult	Buldir	1990	Stomach	1	0
<u>Harlequin duck</u>					
Adult	Egg	1992	Stomach	2	0
Adult	Semidi Islands	1992	Stomach	1	0
<u>White-winged scoter</u>					
Adult	Chuginadak	1990	Stomach	1	0
<u>Northern fulmar</u>					
Adult	Big Koniujii	1990	Stomach	7	0
Adult	Buldir	(1989)	Stomach	0	0
Adult	Chowiet	1995	Stomach	5	0
Adult	Semidi Islands	1990, 1992	Stomach	13	0
Adult	St. George	1975, 1977-1978, 1984	Stomach	20	0
Adult	St. Paul	1978	Stomach	1	0
Adult	Suklik	1994	Stomach	4	0
Adult	SW Lighthouse	1991	Stomach	7	0
Chick	Chowiet	2002	Regurgitation	6	0
Chick	St. George	1976	Regurgitation	1	0
Unknown	Unknown	2002	Unknown	19	0
<u>Short-tailed shearwater</u>					
Adult	Attu	1988	Stomach	1	0
Adult	Big Koniujii	1990	Stomach	1	0
Adult	Buldir	1990	Stomach	1	0
Adult	Cape Lisburne	1983	Stomach	1	0
Adult	Poperchenois	1990	Stomach	2	0
Adult	Semidi Islands	1990	Stomach	1	0
Adult	St. George	1984	Stomach	1	0
<u>Fork-tailed storm-petrel</u>					
Adult	Buldir	1989	Stomach	2	0
Adult	Chuginadak	1990	Stomach	9	0
Chick	Great Sitkin	1997	Regurgitation	36	0
Chick	Kasatochi	2004-2007	Regurgitation	132	0
Chick	Aiktak	1997-2001, 2004-2015	Regurgitation	96	3
Chick	Barren Islands	2011, 2013-2014	Regurgitation	113	3
Chick	Buldir	1996-1999, 2001-2015	Regurgitation	342	13
Chick	St. Lazaria	1995-1998, 2001-2015	Regurgitation	357	50
Unknown	St. Lazaria	2010	Regurgitation	1	0
<u>Leach's storm-petrel</u>					
Adult	Agattu	1989	Stomach	1	0
Adult	Buldir	(1989), 1990	Stomach	11	0
Adult	Chuginadak	(1990)	Stomach	0	0
Adult	Semidi Islands	1990	Stomach	14	0
Chick	Aiktak	1997-2001, 2004, 2006-2013, 2015	Regurgitation	64	6
Chick	Buldir	1996-2015	Regurgitation	305	30
Chick	Chowiet	2014	Regurgitation	1	0
Chick	St. Lazaria	1995-1998, 2000-2015	Regurgitation	562	59
<u>Unknown storm-petrel</u>					
Chick	Atka	2002	Regurgitation	15	0
Chick	Buldir	2003	Regurgitation	3	0
Chick	St. Lazaria	1995, 1998, 2005, 2008	Regurgitation	11	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Double-crested cormorant</u>					
Adult	Aiktak	(1991), 1993-1994	Stomach	2	0
Chick	Aiktak	2000	Regurgitation	1	0
<u>Red-faced cormorant</u>					
Adult	Agattu	1988-1989	Stomach	10	0
Adult	Buldir	(1990)	Stomach	0	0
Adult	Mitrofanía	1990	Stomach	1	0
Adult	Semidi Islands	1992	Stomach	3	0
Adult	St. George	1978, 1995	Stomach	2	0
Adult	St. Paul	1975-1979, 1993	Stomach	27	0
Adult	Suklik	1994	Stomach	1	0
Chick	St. George	1976-1978, 1984, 2005	Regurgitation, Bolus	83	0
Chick	St. Paul	1975-1978, 1984, 1996, 1998, 2009-2015	Regurgitation, Bolus	90	68
Immature	St. Paul	1975-1976	Stomach	3	0
<u>Pelagic cormorant</u>					
Adult	Agattu	(1990)	Stomach	0	0
Adult	Barren Islands	1995	Stomach	1	0
Adult	Big Koniúji	1990	Stomach	7	0
Adult	Cape Lisburne	1983	Stomach	4	0
Adult	Flat	1993	Stomach	1	0
Adult	Suklik	1994	Stomach	2	0
Chick	Buldir	2006	Bolus	1	0
Chick	St. Lazaria	1998, 2000-2001, 2004-2009, 2014-2015	Bolus	122	289
<u>Black oystercatcher</u>					
Adult	Big Koniúji	1990	Stomach	1	0
Adult	Chowiet	1995	Stomach	1	0
Adult	Poperchenois	1990	Stomach	2	0
Adult	Semidi Islands	1992	Stomach	2	0
Adult	Suklik	1994	Stomach	1	0
Chick	Aiktak	2013, 2015	Prey pile	18	0
<u>Parasitic jaeger</u>					
Adult	Bogoslof	1993	Stomach	1	0
Adult	Little Kiska	1992	Stomach	1	0
<u>Common murre</u>					
Adult	Agattu	1988, 1989	Stomach	34	0
Adult	Aiktak	1983, 1991, 1993, (1994), 1995, 1998	Stomach	30	0
Adult	Attu	1988, 1995	Stomach	23	0
Adult	Avatanak	1991	Stomach	3	0
Adult	Barren Islands	1995-1999	Stomach	37	0
Adult	Big Koniúji	1990	Stomach	7	0
Adult	Bluff	1978, 1980-1982, 1984-1988, 1990, 2002	Stomach	196	0
Adult	Bogoslof	1991, 1993-1994, 1999-2000	Stomach	13	0
Adult	Buldir	1988-1989, 1998	Stomach	19	0
Adult	Cape Lisburne	1977-1981, 1983-1987, 1992-1993, 1995-1998	Stomach	172	0
Adult	Cape Thompson	1976-1979, 1982, 1988, 1990-1991, 1995	Stomach	89	0
Adult	Chagulak	1993	Stomach	1	0
Adult	Chisik	1995-1999	Stomach	45	0
Adult	Chowiet	1995, 1998	Stomach	17	0
Adult	Gull	1998	Stomach	7	0
Adult	Haystacks	1991	Stomach	3	0
Adult	Kagamil	1993	Stomach	4	0
Adult	Kateekuk	(1995)	Stomach	0	0
Adult	Koniúji	1996, 1998	Stomach	6	0
Adult	Midun	(1991), 1992-1993	Stomach	13	0
Adult	Mitrofanía	1990	Stomach	3	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Common murre (continued)</u>					
Adult	Poperchenois	1990	Stomach	5	0
Adult	Semidi Islands	1992, 1995	Stomach	21	0
Adult	St. George	1977-1978, 1981, 1984-1986, 1992-(1993), 1997-2006	Stomach, Lavage, Regurgitation	87	11
Adult	St. Matthew	1982-1983, 1985-1986, 1997	Stomach	209	0
Adult	St. Paul	1975-1979, 1984, 1992-1995, 1997-2000, 2008	Stomach, Lavage	148	0
Adult	Suklik	1993-1994	Stomach	4	0
Adult	SW Lighthouse	1991	Stomach	3	0
Adult	Unalaska	1990	Stomach	1	0
Chick	Barren Islands	1995-2011, 2013	Bill load	3015	0
Chick	Bluff	1978	Bill load, Stomach	2	0
Chick	Cape Lisburne	1995, 1997	Stomach	3	0
Chick	Cape Thompson	1978, (1990)	Bill load, Unknown	2	0
Chick	Chisik	1996-1999	Bill load	1578	0
Chick	Chowiet	1998, 2002, 2004-2006	Bill load	525	0
Chick	Gull	1995-1999	Bill load, Regurgitation	1175	0
Chick	St. George	1976-1978, 1981, 1984, 1998-1999, 2001, 2003-2004, 2007, 2010	Bill load, Regurgitation, Stomach	182	0
Chick	St. Matthew	1982-1983, 1985-1986	Bill load	27	0
Chick	St. Paul	1976-1979, 1984, 2008, 2010	Bill load, Regurgitation	109	0
<u>Thick-billed murre</u>					
Adult	Agattu	1988-1989	Stomach	8	0
Adult	Aiktak	1983, 1993-1994, 1998	Stomach	12	0
Adult	Attu	1995	Stomach	1	0
Adult	Barren Islands	1996, 1999	Stomach	2	0
Adult	Big Koniuji	(1990)	Stomach	0	0
Adult	Bluff	(1980, 1984), 1986	Stomach	1	0
Adult	Bogoslof	1991, 1993-1994, 1999-2000, 2002, 2009	Stomach, Lavage	81	0
Adult	Buldir	1988-1990, 1998	Stomach	71	0
Adult	Cape Lisburne	1977-1981, 1983-1987, 1992-1993, 1995-1998	Stomach	521	0
Adult	Cape Thompson	1976-1979, 1982, 1988, 1990-1991, 1995	Stomach	282	0
Adult	Chagulak	1993	Stomach	1	0
Adult	Flat	1993	Stomach	1	0
Adult	Haystacks	1991	Stomach	9	0
Adult	Kagamil	1993	Stomach	1	0
Adult	Koniuji	1996, 1998	Stomach	11	0
Adult	Midun	1992-1994	Stomach	4	0
Adult	Semidi Islands	1990	Stomach	1	0
Adult	St. George	1977-1978, 1981, 1984-1988, 1992-1993, 1997-2010	Stomach, Lavage, Regurgitation	523	46
Adult	St. Matthew	1982-1983, 1985-1986, 1997	Stomach	221	0
Adult	St. Paul	1975-1979, 1984, 1988, 1992-1995, 1997-2000, 2008-2010	Stomach	344	4
Chick	Bogoslof	2009	Unknown	1	0
Chick	Buldir	2010	Bill load	90	0
Chick	Cape Lisburne	1995, 1997-1998	Stomach	29	0
Chick	Cape Thompson	1978	Bill load, Stomach	3	0
Chick	Chowiet	1998, 2002, 2004	Bill load	8	0
Chick	St. George	1976-1978, 1981, 1984, 1987-1988, 1999, 2001, 2003-2004, 2006-2010	Bill load, Regurgitation, Unknown	1140	0
Chick	St. Matthew	1982-1983, 1985-1986	Bill load	6	0
Chick	St. Paul	1975-1979, 1984, 1987-1988, 2000, 2008-2010	Bill load, Regurgitation, Stomach, Unk.	1005	0
Unknown	St. George	1993, 1999	Regurgitation	0	2
<u>Unknown murre</u>					
Chick	St. George	1976, 2007	Bill load	6	0
Chick	St. Paul	1975-1977	Bill load, Stomach	13	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Pigeon guillemot</u>					
Adult	Adak	1996	Stomach	1	0
Adult	Agattu	1989	Stomach	2	0
Adult	Aiktak	1993, 1995	Stomach	5	0
Adult	Anangula	1994	Stomach	1	0
Adult	Big Koniuji	1990	Stomach	10	0
Adult	Chowiet	1995	Stomach	1	0
Adult	Egg and Sedanka	1993	Stomach	1	0
Adult	Flat	1993	Stomach	3	0
Adult	Kagamil	1993	Stomach	2	0
Adult	Poperchenois	1990	Stomach	2	0
Adult	Semidi Islands	(1990), 1992	Stomach	1	0
Adult	St. Matthew	1982	Stomach	11	0
Adult	Suklik	1993	Stomach	3	0
Adult	Unalaska	1990	Stomach	4	0
Chick	Aiktak	2000, 2005	Bill load	3	0
<u>Marbled murrelet</u>					
Adult	Adak	1996	Stomach	5	0
Adult	Attu	1992-1995	Stomach	9	0
Adult	Big Koniuji	1990	Stomach	4	0
Adult	Mitrofanina	1992	Stomach	10	0
Adult	Poperchenois	(1990)	Stomach	0	0
Adult	Unakwik	1991	Stomach	13	0
Adult	Unalaska	1990	Stomach	12	0
<u>Kittlitz's murrelet</u>					
Adult	Attu	1992	Stomach	3	0
Adult	Unalaska	1990	Stomach	3	0
<u>Ancient murrelet</u>					
Adult	Adak	1996	Stomach	1	0
Adult	Agattu	(1989), 1990	Stomach	1	0
Adult	Big Koniuji	1990	Stomach	20	0
Adult	Buldir	1988	Stomach	1	0
Adult	Egg and Sedanka	1993	Stomach	1	0
Adult	Haystacks	1991	Stomach	3	0
<u>Cassin's auklet</u>					
Adult	Aiktak	2005	Stomach	1	0
Adult	Big Koniuji	1990	Stomach	15	0
Adult	Buldir	(1988-1990)	Stomach	6	0
Adult	Chuginadak	1990	Stomach	1	0
Adult	Haystacks	1991	Stomach	1	0
Adult	Kagamil	1993	Stomach	1	0
Adult	Semidi Islands	1990	Stomach	1	0
Adult	SW Lighthouse	1991	Stomach	30	0
Chick	Buldir	1993, 1999-2001, 2004-2006, 2009, 2011-2013	Regurgitation	33	15
Chick	Ulak	1998	Regurgitation	1	0
<u>Parakeet auklet</u>					
Adult	Agattu	1988-1989	Stomach	2	0
Adult	Big Koniuji	1990	Stomach	92	0
Adult	Buldir	1976, 1988-1990	Stomach	95	0
Adult	Chagulak	1993	Stomach	1	0
Adult	Chowiet	1995	Stomach	1	0
Adult	Haystacks	1991	Stomach	2	0
Adult	Otter	1976	Stomach	1	0
Adult	Semidi Islands	1990, 1992	Stomach	2	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Parakeet auklet (continued)</u>					
Adult	St. George	1978, 1984	Stomach	20	0
Adult	St. Matthew	1982	Stomach	5	0
Adult	St. Paul	1975-1978	Stomach	42	0
Adult	Suklik	1994	Stomach	5	0
Chick	Buldir	1993-2000, 2003-2015	Regurgitation	363	0
Chick	Chowiet	2015	Regurgitation	13	0
Chick	Gareloi	1996	Regurgitation	1	0
Chick	Kasatochi	1999, 2007	Regurgitation	4	0
Chick	St. George	1984, 2009	Gular, Regurgitation	8	0
Chick	St. Matthew	1982	Gular	1	0
Chick	St. Paul	1976-1977, 1996, 2009	Gular, Regurgitation	40	0
<u>Least auklet</u>					
Adult	Buldir	1976, 1988, 1990	Stomach	12	0
Adult	St. George	1976, 1978, 1984	Stomach	14	0
Adult	St. Paul	1975-1978, 1984	Stomach	93	0
Chick	Buldir	1976, 1991, 1994-2015	Regurgitation, Gular	529	0
Chick	Gareloi	1996, 2006	Regurgitation	57	0
Chick	Kasatochi	1996-2007	Regurgitation	381	8
Chick	Kiska	2001-2010	Regurgitation	246	29
Chick	Semisopochnoi	1997	Regurgitation	40	0
Chick	St. George	1975, 1977, 1984, 1986, 1996-2015	Regurgitation, Gular	715	47
Chick	St. Matthew	1982-1983, 1985-1986	Regurgitation, Gular	109	0
Chick	St. Paul	1975-1978, 1984, 1986, 1989, 1996-2001, 2003-2015	Regurgitation, Gular	782	12
<u>Whiskered auklet</u>					
Adult	Buldir	1976, 1988-1989	Stomach	41	0
Adult	Egg	1991-1992	Stomach	42	0
Adult	Egg and Sedanka	1993	Stomach	16	0
Adult	Kagamil	1993	Stomach	3	0
Chick	Buldir	1976, 1991, 1993-2015	Regurgitation, Gular	753	83
Chick	Egg	2005	Regurgitation	26	0
Chick	Kasatochi	2007	Regurgitation	4	0
<u>Crested auklet</u>					
Adult	Agattu	1990	Stomach	1	0
Adult	Big Koniuji	1990	Stomach	17	0
Adult	Buldir	1976, 1988, 1990	Stomach	12	0
Adult	Chagulak	1992	Stomach	24	0
Adult	Koniuji	1996	Stomach	10	0
Adult	St. George	1984	Stomach	13	0
Adult	St. Paul	1975-1977	Stomach	10	0
Chick	Buldir	1991, 1993-2015	Regurgitation	1032	0
Chick	Gareloi	2006	Regurgitation	32	0
Chick	Kasatochi	1996-2007	Regurgitation	409	10
Chick	Kiska	2001, 2003-2004, 2006-2010	Regurgitation	107	26
Chick	St. George	1984	Gular	13	0
Chick	St. Matthew	1982-1983	Gular	7	0
Chick	St. Paul	1976-1977, 2009	Gular, Regurgitation	22	0
<u>Rhinoceros auklet</u>					
Adult	Big Koniuji	(1990)	Stomach	0	0
Adult	Chowiet	1998	Stomach	6	0
Chick	Chowiet	1979, 1993, 1995, 1998, 2002, 2004-2007, 2009, 2010-2015	Bill load	724	0
Chick	St. Lazaria	1994-2015	Bill load	1229	1

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
Horned puffin					
Adult	Agattu	1989	Stomach	1	0
Adult	Aiktak	1993-1995	Stomach	9	0
Adult	Avatanak	1991	Stomach	1	0
Adult	Big Koniuji	1990	Stomach	46	0
Adult	Bluff	(1978), 1986, (1990)	Stomach	1	0
Adult	Bogoslof	1991	Stomach	1	0
Adult	Buldir	1988, 1990	Stomach	7	0
Adult	Cape Thompson	1982	Stomach	2	0
Adult	Chagulak	1993	Stomach	3	0
Adult	Chisik	1995-1996	Stomach	13	0
Adult	Chowiet	1995	Stomach	5	0
Adult	Egg	1991	Stomach	1	0
Adult	Flat	1993	Stomach	2	0
Adult	Haystacks	(1991)	Stomach	0	0
Adult	Kagamil	1993	Stomach	3	0
Adult	Midun	(1992), 1993-1994	Stomach	6	0
Adult	Mitrofanina	1990, 1992	Stomach	13	0
Adult	Poperchenois	1990	Stomach	1	0
Adult	Semidi Islands	1992	Stomach	16	0
Adult	St. George	1978, 1984	Stomach	15	0
Adult	St. Matthew	1982-1983	Stomach	6	0
Adult	St. Paul	1975-1979, 1984	Stomach	37	0
Adult	Suklik	1993-1994	Stomach	18	0
Adult	Unalaska	1990, 1992	Stomach	13	0
Chick	Aiktak	2000, 2005, 2010, 2012, 2014	Bill load	10	0
Chick	Bird	1996	Bill load	1	0
Chick	Buldir	1988-1991, 1994, 1996, 1998-2015	Bill load	601	0
Chick	Cape Lisburne	1997	Stomach	1	0
Chick	Central	1994	Bill load	1	0
Chick	Chisik	1995-1999	Bill load	546	0
Chick	Chowiet	2014-2015	Bill load	2	0
Chick	High	1994	Bill load	22	0
Chick	Midun	1993-1994	Bill load	8	0
Chick	Sozavarika	1987	Bill load	34	0
Chick	St. George	1984	Bill load	2	0
Chick	St. Paul	1976-1979, 1984	Bill load	26	0
Chick	Suklik	1979, 1985-1987, 1991-1995, 2014	Bill load, Unknown	1286	0
Tufted puffin					
Adult	Agattu	1988-1990	Stomach	110	0
Adult	Aiktak	1990-1995	Stomach	113	0
Adult	Aiktak-Big Koniuji	1990	Stomach	3	0
Adult	Anangula	1994	Stomach	12	0
Adult	Attu	1988	Stomach	4	0
Adult	Avatanak	1991	Stomach	8	0
Adult	Barren Islands	1995-1997, 1999	Stomach	33	0
Adult	Big Koniuji	1990	Stomach	83	0
Adult	Bogoslof	1991, 1993-1994	Stomach	39	0
Adult	Buldir	1988-1990	Stomach	120	0
Adult	Cape Thompson	1982	Stomach	2	0
Adult	Chagulak	1992-1993	Stomach	30	0
Adult	Chowiet	1995	Stomach	10	0
Adult	Chuginadak	1990	Stomach	2	0
Adult	Egg	1991-1992	Stomach	21	0
Adult	Egg and Sedanka	1993	Stomach	14	0
Adult	Flat	1993	Stomach	19	0
Adult	Haystacks	1991	Stomach	9	0
Adult	Kagamil	1993	Stomach	24	0
Adult	Koniuji	1996-1997	Stomach	18	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Tufted puffin (continued)</u>					
Adult	Little Kiska	1992	Stomach	11	0
Adult	Midun	1991-1994	Stomach	56	0
Adult	Mitrofanina	1990, 1992	Stomach	6	0
Adult	Poperchenois	1990	Stomach	2	0
Adult	Puffin	1992	Stomach	17	0
Adult	Semidi Islands	1990, 1992	Stomach	22	0
Adult	St. George	1984	Stomach	8	0
Adult	St. Paul	1975-1979	Stomach	27	0
Adult	Suklik	1993-1994	Stomach	20	0
Adult	SW Lighthouse	1991	Stomach	2	0
Adult	Unalaska	1992	Stomach	15	0
Adult	Yunaska	1993	Stomach	9	0
Chick	Adak	1990	Bill load	2	0
Chick	Agattu	1988-1990	Bill load	35	0
Chick	Aiktak	1986-1987, 1990-2002, 2004-2015	Bill load, Unknown	4270	0
Chick	Anangula	2012	Bill load	40	0
Chick	Ananuliak	1991-1992, 1994	Bill load	130	0
Chick	Baby Islands	2012	Bill load	41	0
Chick	Barren Islands	1995-2013	Bill load	1457	0
Chick	Bogoslof	1991, 1993-1994, 2012	Bill load	337	0
Chick	Buldir	1988-1992, 1994, 1996-2015	Bill load	588	0
Chick	Central	1993-1994	Bill load	91	0
Chick	Chagulak	1992-1993, 2012	Bill load	65	0
Chick	Chitka	2013	Bill load	7	0
Chick	Chowiet	2014-2015	Bill load	2	0
Chick	Egg	1986-1987, 1991-1994, 2012	Bill load	356	0
Chick	Flat	1993	Bill load	50	0
Chick	Gannet	2012	Bill load	1	0
Chick	Gibson	2013	Bill load	3	0
Chick	High	1994, 2014	Bill load	35	0
Chick	Kaligagan	2012	Bill load	55	0
Chick	Little Kiska	2013	Bill load	5	0
Chick	Midun	1986-1987, 1991-1994, 2014	Bill load	1180	0
Chick	Nizki	2013	Bill load	41	0
Chick	Peterson	2014	Bill load	102	0
Chick	Puffin	1991-1994, 2012	Bill load	249	0
Chick	Round	2012	Bill load	8	0
Chick	Savage	2013	Bill load	21	0
Chick	Seal	1995	Bill load	43	0
Chick	Sozavarika	1987, 2014	Bill load	30	0
Chick	Suklik	1979, 1985-1987, 1991-1995, 2014-2015	Bill load	2617	0
Chick	St. Lazaria	1996, 2015	Bill load	17	1
Chick	St. Paul	1976, 1979	Bill load	8	0
Chick	Tangagm	1986	Bill load	49	0
Chick	Ugauishak	1992-1993, 2014	Bill load	133	0
Chick	Unalga	2013	Bill load	26	0
Chick	Vsevidof	1994, 2012	Bill load	129	0
Chick	Whip	2013	Bill load	27	0
<u>Unknown puffin</u>					
Chick	Aiktak	2009, 2015	Bill load	5	0
Chick	Buldir	2000, 2001, 2009	Bill load	9	0
Chick	Central	1994	Bill load	14	0
Chick	Suklik	1994	Bill load	1	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Black-legged kittiwake</u>					
Adult	Agattu	1988, 1989	Stomach	17	0
Adult	Attu	1988	Stomach	17	0
Adult	Barren Islands	1995-1999	Stomach	38	0
Adult	Big Koniuji	1990	Stomach	28	0
Adult	Bluff	1978, 1980-1982, 1984-1990, 1998	Stomach	269	0
Adult	Bogoslof	1991, 1993-1994, 1999-2000, 2002	Stomach	65	0
Adult	Buldir	1988-1990	Stomach	110	0
Adult	Cape Lisburne	1977-1981, 1983-1987, 1992-1993, 1995-1998	Stomach	287	0
Adult	Cape Thompson	1976-1979, 1982, 1988, 1990-1991, 1995	Stomach	172	0
Adult	Chisik	1995-1997, 1999	Stomach	30	0
Adult	Chowiet	1995, 1998	Stomach	13	0
Adult	Egg	1991	Stomach	3	0
Adult	Egg and Sedanka	1993	Stomach	7	0
Adult	Flat	1993	Stomach	9	0
Adult	Haystacks	1991, 1995	Stomach	28	0
Adult	Kagamil	1993	Stomach	1	0
Adult	Koniuji	1996, 1998	Stomach	26	0
Adult	Midun	1991-1994	Stomach	33	0
Adult	Mitrofanina	1990, 1992	Stomach	20	0
Adult	Poperchenois	1990	Stomach	12	0
Adult	Puffin	1992	Stomach	2	0
Adult	Semidi Islands	1990, 1992	Stomach	7	0
Adult	St. George	1977-1978, 1981, 1984-1986, 1992-1994, 1997-2005	Stomach	449	38
Adult	St. Matthew	1982-1983, 1985-1986, 1997	Stomach	177	0
Adult	St. Paul	1975-1979, 1984, 1992-1995, 1997-2000	Stomach	334	0
Adult	Suklik	1993-1994	Stomach	3	0
Adult	Unalaska	1990, 1992	Stomach	7	0
Adult+Chick	Bogoslof	2009	Lavage, Regurgitation	3	0
Adult+Chick	St. George	2008, (2009)	Lavage	29	0
Adult+Chick	St. Paul	2008-2009	Regurgitation, Lavage	32	0
Chick	Barren Islands	1995-1999	Regurgitation	403	0
Chick	Bird	1996	Regurgitation	9	0
Chick	Bluff	1983, (2002)	Regurgitation, Unk.	3	0
Chick	Bogoslof	1999-2000, 2009	Regurgitation, Unk.	59	0
Chick	Buldir	1988-1989, 1991-2002, 2004-2013	Regurgitation	307	0
Chick	Cape Lisburne	1980-1981, 1995, 1997-1998	Regurgitation, Stomach	78	0
Chick	Chisik	1996-1997	Regurgitation	26	0
Chick	Gull	1995-1997	Regurgitation	192	0
Chick	Kateekuk	1998	Stomach	7	0
Chick	St. George	1976-1978, 1981, 1988, 1992-1994, 1998-2000, 2003, 2006, 2008-2014	Regurgitation, Unk.	315	201
Chick	St. Paul	1975-1979, 1984-1985, 1987-1988, 1997-1998, 2000, 2003, 2006, 2008-2012	Regurgitation, Stomach	555	0
Immature	St. Paul	1984	Stomach	1	0
<u>Red-legged kittiwake</u>					
Adult	Bogoslof	1999-2000	Stomach	27	0
Adult	Buldir	1988-1990	Stomach	11	0
Adult	St. George	1976-1978, 1981, 1984-1986, 1992-1994, 1998-2005	Stomach	346	38
Adult	St. Paul	1975-1979, 1984, 1992, 1994, 1997	Stomach	120	0
Chick	Bogoslof	1999-2000	Regurgitation, Unk.	28	0
Chick	Buldir	1988-1989, 1991-2002, 2004-2013	Regurgitation	411	0
Chick	St. George	1975-1978, 1980, 1984, 1987-1988, 1991-1995, 1998-2003, 2005-2015	Regurgitation, Stomach	689	531
Chick	St. Paul	1976-1977, 1979, 2006-2007, 2010	Regurgitation, Unk.	34	0
Juvenile	St. George	1999	Stomach	1	0

Table 2 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by species in taxonomic order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (< 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Recipient	Island	Years	Diet type	# samples with data	# pending analysis
<u>Unknown kittiwake</u>					
Adult	Bogoslof	1999	Stomach	1	0
Chick	St. Paul	1975	Regurgitation	1	0
<u>Black-headed gull</u>					
Adult	Cape Lisburne	1983	Stomach	4	0
<u>Mew gull</u>					
Adult	Big Koniuji	1990	Stomach	2	0
Adult	Mitrofanía	1992	Stomach	1	0
<u>Glaucous-winged gull</u>					
Adult	Agattu	1989-1990	Stomach	3	0
Adult	Aikta	1995, 2008-2015	Pellet, Stomach	1089	0
Adult	Avatanak	1991	Stomach	9	0
Adult	Barren Islands	1995	Stomach	5	0
Adult	Big Koniuji	1990	Stomach	11	0
Adult	Bluff	1986	Stomach	1	0
Adult	Buldir	1988, 1997-2015	Pellet, Stomach	10114	0
Adult	Chisik	1995	Stomach	3	0
Adult	Chowiet	1995, 2004-2007, 2009-2015	Pellet, Stomach	2579	0
Adult	Flat	1993	Stomach	2	0
Adult	Kasatochi	2003-2007	Pellet	1374	0
Adult	Mitrofanía	1992	Stomach	1	0
Adult	Semidi Islands	1990, 1992	Stomach	3	0
Adult	St. Lazaria	2003, 2015	Pellet, Stomach	83	0
Adult	St. Paul	1978	Stomach	9	0
Chick	Aikta	1996-2009, 2015	Bolus, Regurgitation, Unknown	455	48
Chick	Buldir	2010	Unknown	1	0
Chick	Chowiet	2002, 2004	Regurgitation	16	12
Chick	Gull	1995	Unknown	10	0
Chick	St. Lazaria	2002, 2006, 2010-2012	Regurgitation	11	7
Unknown	Aikta	2014-2015	Regurgitation, Unknown	90	0
<u>Glaucous gull</u>					
Adult	Haystacks	1991	Stomach	1	0
<u>Unknown</u>					
Adult	Haystacks	1991	Stomach	2	0
Adult	Unknown	1991	Stomach	2	0
Chick	St. George	1976-1977	Bill load, Unknown	3	0
Chick	St. Paul	1976-1977	Bill load, Unknown	8	0
Unknown	Aikta	2001	Unknown	4	0

Table 3. Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Adak</u>					
PIGU	Adult	1996	Stomach	1	0
MAMU	Adult	1996	Stomach	5	0
ANMU	Adult	1996	Stomach	1	0
TUPU	Chick	1990	Bill load	2	0
<u>Agattu</u>					
LHSP	Adult	1989	Stomach	1	0
RFCO	Adult	1988-1989	Stomach	10	0
PECO	Adult	(1990)	Stomach	0	0
COMU	Adult	1988, 1989	Stomach	34	0
TBMU	Adult	1988-1989	Stomach	8	0
PIGU	Adult	1989	Stomach	2	0
ANMU	Adult	(1989), 1990	Stomach	1	0
PAAU	Adult	1988-1989	Stomach	2	0
CRAU	Adult	1990	Stomach	1	0
HOPU	Adult	1989	Stomach	1	0
TUPU	Adult	1988-1990	Stomach	110	0
TUPU	Chick	1988-1990	Bill load	35	0
BLKI	Adult	1988, 1989	Stomach	17	0
GWGU	Adult	1989-1990	Stomach	3	0
<u>Aiktak</u>					
FTSP	Chick	1997-2001, 2004-2015	Regurgitation	96	3
LHSP	Chick	1997-2001, 2004, 2006-2013, 2015	Regurgitation	64	6
DCCO	Adult	(1991), 1993-1994	Stomach	2	0
DCCO	Chick	2000	Regurgitation	1	0
BLOY	Chick	2013, 2015	Prey pile	18	0
COMU	Adult	1983, 1991, 1993, (1994), 1995, 1998	Stomach	30	0
TBMU	Adult	1983, 1993-1994, 1998	Stomach	12	0
PIGU	Adult	1993, 1995	Stomach	5	0
PIGU	Chick	2000, 2005	Bill load	3	0
CAAU	Adult	2005	Stomach	1	0
HOPU	Adult	1993-1995	Stomach	9	0
HOPU	Chick	2000, 2005, 2010, 2012, 2014	Bill load	10	0
TUPU	Adult	1990-1995	Stomach	113	0
TUPU	Chick	1986-1987, 1990-2002, 2004-2015	Bill load, Unknown	4270	0
UNPU	Chick	2009, 2015	Bill load	5	0
GWGU	Adult	1995, 2008-2015	Pellet, Stomach	1089	0
GWGU	Chick	1996-2009, 2015	Bolus, Regurgitation, Unknown	455	48
GWGU	Unknown	2014-2015	Regurgitation, Unknown	90	0
UUUU	Unknown	2001	Unknown	4	0
<u>Aiktak/Big Koniui</u>					
TUPU	Adult	1990	Stomach	3	0
<u>Anangula</u>					
PIGU	Adult	1994	Stomach	1	0
TUPU	Adult	1994	Stomach	12	0
TUPU	Chick	2012	Bill load	40	0
<u>Ananuliak</u>					
TUPU	Chick	1991-1992, 1994	Bill load	130	0
<u>Atka</u>					
UNST	Chick	2002	Regurgitation	15	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Attu</u>					
STSH	Adult	1988	Stomach	1	0
COMU	Adult	1988, 1995	Stomach	23	0
TBMU	Adult	1995	Stomach	1	0
MAMU	Adult	1992-1995	Stomach	9	0
KIMU	Adult	1992	Stomach	3	0
TUPU	Adult	1988	Stomach	4	0
BLKI	Adult	1988	Stomach	17	0
<u>Avatanak</u>					
COMU	Adult	1991	Stomach	3	0
HOPU	Adult	1991	Stomach	1	0
TUPU	Adult	1991	Stomach	8	0
GWGU	Adult	1991	Stomach	9	0
<u>Baby Islands</u>					
TUPU	Chick	2012	Bill load	41	0
<u>Barren Islands (including East and West Amatuli)</u>					
FTSP	Chick	2011, 2013-2014	Regurgitation	113	3
PECO	Adult	1995	Stomach	1	0
COMU	Adult	1995-1999	Stomach	37	0
COMU	Chick	1995-2011, 2013	Bill load	3015	0
TBMU	Adult	1996, 1999	Stomach	2	0
TUPU	Adult	1995-1997, 1999	Stomach	33	0
TUPU	Chick	1995-2013	Bill load	1457	0
BLKI	Adult	1995-1999	Stomach	38	0
BLKI	Chick	1995-1999	Regurgitation	403	0
GWGU	Adult	1995	Stomach	5	0
<u>Big Koniuij</u>					
NOFU	Adult	1990	Stomach	7	0
STSH	Adult	1990	Stomach	1	0
PECO	Adult	1990	Stomach	7	0
BLOY	Adult	1990	Stomach	1	0
COMU	Adult	1990	Stomach	7	0
TBMU	Adult	(1990)	Stomach	0	0
PIGU	Adult	1990	Stomach	10	0
MAMU	Adult	1990	Stomach	4	0
ANMU	Adult	1990	Stomach	20	0
BLKI	Adult	1990	Stomach	28	0
CAAU	Adult	1990	Stomach	15	0
PAAU	Adult	1990	Stomach	92	0
CRAU	Adult	1990	Stomach	17	0
RHAU	Adult	(1990)	Stomach	0	0
HOPU	Adult	1990	Stomach	46	0
TUPU	Adult	1990	Stomach	83	0
MEGU	Adult	1990	Stomach	2	0
GWGU	Adult	1990	Stomach	11	0
<u>Bird</u>					
HOPU	Chick	1996	Bill load	1	0
BLKI	Chick	1996	Regurgitation	9	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
Bluff					
COMU	Adult	1978, 1980-1982, 1984-1988, 1990, 2002	Stomach	196	0
COMU	Chick	1978	Bill load, Stomach	2	0
TBMU	Adult	(1980, 1984), 1986	Stomach	1	0
HOPU	Adult	(1978), 1986, (1990)	Stomach	1	0
BLKI	Adult	1978, 1980-1982, 1984-1990, 1998	Stomach	269	0
BLKI	Chick	1983, (2002)	Regurgitation, Unk.	3	0
GWGU	Adult	1986	Stomach	1	0
Bogoslof					
PAJA	Adult	1993	Stomach	1	0
COMU	Adult	1991, 1993-1994, 1999-2000	Stomach	13	0
TBMU	Adult	1991, 1993-1994, 1999-2000, 2002, 2009	Stomach, Lavage	81	0
TBMU	Chick	2009	Unknown	1	0
HOPU	Adult	1991	Stomach	1	0
TUPU	Adult	1991, 1993-1994	Stomach	39	0
TUPU	Chick	1991, 1993-1994, 2012	Bill load	337	0
BLKI	Adult	1991, 1993-1994, 1999-2000, 2002	Stomach	65	0
BLKI	Adult+Chick	2009	Lavage, Regurgitation	3	0
BLKI	Chick	1999-2000, 2009	Regurgitation, Unk.	59	0
RLKI	Adult	1999-2000	Stomach	27	0
RLKI	Chick	1999-2000	Regurgitation, Unk.	28	0
UNKI	Adult	1999	Stomach	1	0
Buldir					
COEI	Adult	1990	Stomach	1	0
NOFU	Adult	(1989)	Stomach	0	0
STSH	Adult	1990	Stomach	1	0
FTSP	Adult	1989	Stomach	2	0
FTSP	Chick	1996-1999, 2001-2015	Regurgitation	342	13
LHSP	Adult	(1989), 1990	Stomach	11	0
LHSP	Chick	1996-2015	Regurgitation	305	30
UNST	Chick	2003	Regurgitation	3	0
RFCO	Adult	(1990)	Stomach	0	0
PECO	Chick	2006	Bolus	1	0
COMU	Adult	1988-1989, 1998	Stomach	19	0
TBMU	Adult	1988-1990, 1998	Stomach	71	0
TBMU	Chick	2010	Bill load	90	0
ANMU	Adult	1988	Stomach	1	0
CAAU	Adult	(1988-1990)	Stomach	6	0
CAAU	Chick	1993, 1999-2001, 2004-2006, 2009, 2011-2013	Regurgitation	33	15
PAAU	Adult	1976, 1988-1990	Stomach	95	0
PAAU	Chick	1993-2000, 2003-2015	Regurgitation	363	0
LEAU	Adult	1976, 1988, 1990	Stomach	12	0
LEAU	Chick	1976, 1991, 1994-2015	Regurgitation, Gular	529	0
WHAU	Adult	1976, 1988-1989	Stomach	41	0
WHAU	Chick	1976, 1991, 1993-2015	Regurgitation, Gular	753	83
CRAU	Adult	1976, 1988, 1990	Stomach	12	0
CRAU	Chick	1991, 1993-2015	Regurgitation	1032	0
HOPU	Adult	1988, 1990	Stomach	7	0
HOPU	Chick	1988-1991, 1994, 1996, 1998-2015	Bill load	601	0
TUPU	Adult	1988-1990	Stomach	120	0
TUPU	Chick	1988-1992, 1994, 1996-2015	Bill load	588	0
UNPU	Chick	2000, 2001, 2009	Bill load	9	0
BLKI	Adult	1988-1990	Stomach	110	0
BLKI	Chick	1988-1989, 1991-2002, 2004-2013	Regurgitation	307	0
RLKI	Adult	1988-1990	Stomach	11	0
RLKI	Chick	1988-1989, 1991-2002, 2004-2013	Regurgitation	411	0
GWGU	Adult	1988, 1997-2015	Pellet, Stomach	10114	0
GWGU	Chick	2010	Unknown	1	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Cape Lisburne</u>					
STSH	Adult	1983	Stomach	1	0
PECO	Adult	1983	Stomach	4	0
COMU	Adult	1977-1981, 1983-1987, 1992-1993, 1995-1998	Stomach	172	0
COMU	Chick	1995, 1997	Stomach	3	0
TBMU	Adult	1977-1981, 1983-1987, 1992-1993, 1995-1998	Stomach	521	0
TBMU	Chick	1995, 1997-1998	Stomach	29	0
HOPU	Chick	1997	Stomach	1	0
BLKI	Adult	1977-1981, 1983-1987, 1992-1993, 1995-1998	Stomach	287	0
BLKI	Chick	1980-1981, 1995, 1997-1998	Regurgitation, Stomach	78	0
BLGU	Adult	1983	Stomach	4	0
<u>Cape Thompson</u>					
COMU	Adult	1976-1979, 1982, 1988, 1990-1991, 1995	Stomach	89	0
COMU	Chick	1978, (1990)	Bill load, Unknown	2	0
TBMU	Adult	1976-1979, 1982, 1988, 1990-1991, 1995	Stomach	282	0
TBMU	Chick	1978	Bill load, Stomach	3	0
HOPU	Adult	1982	Stomach	2	0
TUPU	Adult	1982	Stomach	2	0
BLKI	Adult	1976-1979, 1982, 1988, 1990-1991, 1995	Stomach	172	0
<u>Central</u>					
HOPU	Chick	1994	Bill load	1	0
TUPU	Chick	1993-1994	Bill load	91	0
UNPU	Chick	1994	Bill load	14	0
<u>Chaqulak</u>					
COMU	Adult	1993	Stomach	1	0
TBMU	Adult	1993	Stomach	1	0
PAAU	Adult	1993	Stomach	1	0
CRAU	Adult	1992	Stomach	24	0
HOPU	Adult	1993	Stomach	3	0
TUPU	Adult	1992-1993	Stomach	30	0
TUPU	Chick	1992-1993, 2012	Bill load	65	0
<u>Chisik</u>					
COMU	Adult	1995-1999	Stomach	45	0
COMU	Chick	1996-1999	Bill load	1578	0
HOPU	Adult	1995-1996	Stomach	13	0
HOPU	Chick	1995-1999	Bill load	546	0
BLKI	Adult	1995-1997, 1999	Stomach	30	0
BLKI	Chick	1996-1997	Regurgitation	26	0
GWGU	Adult	1995	Stomach	3	0
<u>Chitka</u>					
TUPU	Chick	2013	Bill load	7	0
<u>Chowiet</u>					
NOFU	Adult	1995	Stomach	5	0
NOFU	Chick	2002	Regurgitation	6	0
LHSP	Chick	2014	Regurgitation	1	0
BLOY	Adult	1995	Stomach	1	0
COMU	Adult	1995, 1998	Stomach	17	0
COMU	Chick	1998, 2002, 2004-2006	Bill load	525	0
TBMU	Chick	1998, 2002, 2004	Bill load	8	0
PIGU	Adult	1995	Stomach	1	0
PAAU	Adult	1995	Stomach	1	0
PAAU	Chick	2015	Regurgitation	13	0
RHAU	Adult	1998	Stomach	6	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Chowiet (continued)</u>					
RHAU	Chick	1979, 1993, 1995, 1998, 2002, 2004-2007, 2009, 2010-2015	Bill load	724	0
HOPU	Adult	1995	Stomach	5	0
HOPU	Chick	2014-2015	Bill load	2	0
TUPU	Adult	1995	Stomach	10	0
TUPU	Chick	2014-2015	Bill load	2	0
BLKI	Adult	1995, 1998	Stomach	13	0
GWGU	Adult	1995, 2004-2007, 2009-2015	Pellet, Stomach	2579	0
GWGU	Chick	2002, 2004	Regurgitation	16	12
<u>Chuginadak</u>					
WWSC	Adult	1990	Stomach	1	0
FTSP	Adult	1990	Stomach	9	0
LHSP	Adult	(1990)	Stomach	0	0
CAAU	Adult	1990	Stomach	1	0
TUPU	Adult	1990	Stomach	2	0
<u>Egg</u>					
HARD	Adult	1992	Stomach	2	0
WHAU	Adult	1991-1992	Stomach	42	0
WHAU	Chick	2005	Regurgitation	26	0
HOPU	Adult	1991	Stomach	1	0
TUPU	Adult	1991-1992	Stomach	21	0
TUPU	Chick	1986-1987, 1991-1994, 2012	Bill load	356	0
BLKI	Adult	1991	Stomach	3	0
<u>Egg and Sedanka</u>					
PIGU	Adult	1993	Stomach	1	0
ANMU	Adult	1993	Stomach	1	0
WHAU	Adult	1993	Stomach	16	0
TUPU	Adult	1993	Stomach	14	0
BLKI	Adult	1993	Stomach	7	0
<u>Flat</u>					
PECO	Adult	1993	Stomach	1	0
TBMU	Adult	1993	Stomach	1	0
PIGU	Adult	1993	Stomach	3	0
HOPU	Adult	1993	Stomach	2	0
TUPU	Adult	1993	Stomach	19	0
TUPU	Chick	1993	Bill load	50	0
BLKI	Adult	1993	Stomach	9	0
GWGU	Adult	1993	Stomach	2	0
<u>Gannet</u>					
TUPU	Chick	2012	Bill load	1	0
<u>Gareloi</u>					
PAAU	Chick	1996	Regurgitation	1	0
LEAU	Chick	1996, 2006	Regurgitation	57	57
CRAU	Chick	2006	Regurgitation	32	0
<u>Gibson</u>					
TUPU	Chick	2013	Bill load	3	0
<u>Great Sitkin</u>					
FTSP	Chick	1997	Regurgitation	36	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Gull</u>					
COMU	Adult	1998	Stomach	7	0
COMU	Chick	1995-1999	Bill load, Regurgitation	1175	0
GWGU	Chick	1995	Unknown	10	0
BLKI	Chick	1995-1997	Regurgitation	192	0
<u>Haystacks</u>					
COMU	Adult	1991	Stomach	3	0
TBMU	Adult	1991	Stomach	9	0
ANMU	Adult	1991	Stomach	3	0
CAAU	Adult	1991	Stomach	1	0
PAAU	Adult	1991	Stomach	2	0
HOPU	Adult	(1991)	Stomach	0	0
TUPU	Adult	1991	Stomach	9	0
BLKI	Adult	1991, 1995	Stomach	28	0
GLGU	Adult	1991	Stomach	1	0
UUUU	Adult	1991	Stomach	2	0
<u>High</u>					
HOPU	Chick	1994	Bill load	22	0
TUPU	Chick	1994, 2014	Bill load	35	0
<u>Kagamil</u>					
COMU	Adult	1993	Stomach	4	0
TBMU	Adult	1993	Stomach	1	0
PIGU	Adult	1993	Stomach	2	0
CAAU	Adult	1993	Stomach	1	0
WHAU	Adult	1993	Stomach	3	0
HOPU	Adult	1993	Stomach	3	0
TUPU	Adult	1993	Stomach	24	0
BLKI	Adult	1993	Stomach	1	0
<u>Kaligagan</u>					
TUPU	Chick	2012	Bill load	55	0
<u>Kasatochi</u>					
FTSP	Chick	2004-2007	Regurgitation	132	0
PAAU	Chick	1999, 2007	Regurgitation	4	0
LEAU	Chick	1996-2007	Regurgitation	381	8
WHAU	Chick	2007	Regurgitation	4	0
CRAU	Chick	1996-2007	Regurgitation	409	10
GWGU	Adult	2003-2007	Pellet	1374	0
<u>Kateekuk</u>					
COMU	Adult	(1995)	Stomach	0	0
BLKI	Chick	1998	Stomach	7	0
<u>Kiska</u>					
LEAU	Chick	2001-2010	Regurgitation	246	29
CRAU	Chick	2001, 2003-2004, 2006-2010	Regurgitation	107	26
<u>Koniuji</u>					
COMU	Adult	1996, 1998	Stomach	6	0
TBMU	Adult	1996, 1998	Stomach	11	0
CRAU	Adult	1996	Stomach	10	0
TUPU	Adult	1996-1997	Stomach	18	0
BLKI	Adult	1996, 1998	Stomach	26	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Little Kiska</u>					
PAJA	Adult	1992	Stomach	1	0
TUPU	Adult	1992	Stomach	11	0
TUPU	Chick	2013	Bill load	5	0
<u>Midun</u>					
COMU	Adult	(1991), 1992-1993	Stomach	13	0
TBMU	Adult	1992-1994	Stomach	4	0
HOPU	Adult	(1992), 1993-1994	Stomach	6	0
HOPU	Chick	1993-1994	Bill load	8	0
TUPU	Adult	1991-1994	Stomach	56	0
TUPU	Chick	1986-1987, 1991-1994, 2014	Bill load	1180	0
BLKI	Adult	1991-1994	Stomach	33	0
<u>Mitrofanía</u>					
RFCO	Adult	1990	Stomach	1	0
COMU	Adult	1990	Stomach	3	0
MAMU	Adult	1992	Stomach	10	0
HOPU	Adult	1990, 1992	Stomach	13	0
TUPU	Adult	1990, 1992	Stomach	6	0
BLKI	Adult	1990, 1992	Stomach	20	0
MEGU	Adult	1992	Stomach	1	0
GWGU	Adult	1992	Stomach	1	0
<u>Nizki</u>					
TUPU	Chick	2013	Bill load	41	0
<u>Otter</u>					
PAAU	Adult	1976	Stomach	1	0
<u>Peterson</u>					
TUPU	Chick	2014	Bill load	102	0
<u>Poperchenois</u>					
STSH	Adult	1990	Stomach	2	0
BLOY	Adult	1990	Stomach	2	0
COMU	Adult	1990	Stomach	5	0
PIGU	Adult	1990	Stomach	2	0
MAMU	Adult	(1990)	Stomach	0	0
HOPU	Adult	1990	Stomach	1	0
TUPU	Adult	1990	Stomach	2	0
BLKI	Adult	1990	Stomach	12	0
<u>Puffin</u>					
TUPU	Adult	1992	Stomach	17	0
TUPU	Chick	1991-1994, 2012	Bill load	249	0
BLKI	Adult	1992	Stomach	2	0
<u>Round</u>					
TUPU	Chick	2012	Bill load	8	0
<u>Savage</u>					
TUPU	Chick	2013	Bill load	21	0
<u>Seal</u>					
TUPU	Chick	1995	Bill load	43	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Semidi Islands (unspecified)</u>					
HARD	Adult	1992	Stomach	1	0
NOFU	Adult	1990, 1992	Stomach	13	0
STSH	Adult	1990	Stomach	1	0
LHSP	Adult	1990	Stomach	14	0
RFCO	Adult	1992	Stomach	3	0
BLOY	Adult	1992	Stomach	2	0
COMU	Adult	1992, 1995	Stomach	21	0
TBMU	Adult	1990	Stomach	1	0
PIGU	Adult	(1990), 1992	Stomach	1	0
CAAU	Adult	1990	Stomach	1	0
PAAU	Adult	1990, 1992	Stomach	2	0
HOPU	Adult	1992	Stomach	16	0
TUPU	Adult	1990, 1992	Stomach	22	0
BLKI	Adult	1990, 1992	Stomach	7	0
GWGU	Adult	1990, 1992	Stomach	3	0
<u>Semisopochnoi</u>					
LEAU	Chick	1997	Regurgitation	40	0
<u>Sozavarika</u>					
HOPU	Chick	1987	Bill load	34	0
TUPU	Chick	1987, 2014	Bill load	30	0
<u>St. George</u>					
NOFU	Adult	1975, 1977-1978, 1984	Stomach	20	0
NOFU	Chick	1976	Regurgitation	1	0
STSH	Adult	1984	Stomach	1	0
RFCO	Adult	1978, 1995	Stomach	2	0
RFCO	Chick	1976-1978, 1984, 2005	Regurgitation, Bolus	83	0
COMU	Adult	1977-1978, 1981, 1984-1986, 1992-(1993), 1997-2006	Stomach, Regurgitation, Lavage	87	11
COMU	Chick	1976-1978, 1981, 1984, 1998-1999, 2001, 2003-2004, 2007, 2010	Bill load, Regurgitation, Stomach	182	0
TBMU	Adult	1977-1978, 1981, 1984-1988, 1992-1993, 1997-2010	Stomach, Regurgitation, Lavage	523	46
TBMU	Chick	1976-1978, 1981, 1984, 1987-1988, 1999, 2001, 2003-2004, 2006-2010	Bill load, Regurgitation, Unknown	1140	0
TBMU	Unknown	1993, 1999	Regurgitation		2
UNMU	Chick	1976, 2007	Bill load	6	0
PAAU	Adult	1978, 1984	Stomach	20	0
PAAU	Chick	1984, 2009	Gular, Regurgitation	8	0
LEAU	Adult	1976, 1978, 1984	Stomach	14	0
LEAU	Chick	1975, 1977, 1984, 1986, 1996-2015	Regurgitation, Gular	715	47
CRAU	Adult	1984	Stomach	13	0
CRAU	Chick	1984	Gular	13	0
HOPU	Adult	1978, 1984	Stomach	15	0
HOPU	Chick	1984	Bill load	2	0
TUPU	Adult	1984	Stomach	8	0
BLKI	Adult	1977-1978, 1981, 1984-1986, 1992-1994, 1997-2005	Stomach	449	38
BLKI	Adult+Chick	2008, (2009)	Lavage	29	0
BLKI	Chick	1976-1978, 1981, 1988, 1992-1994, 1998-2000, 2003, 2006, 2008-2014	Regurgitation, Unknown	315	201
RLKI	Adult	1976-1978, 1981, 1984-1986, 1992-1994, 1998-2005	Stomach	346	38
RLKI	Chick	1975-1978, 1980, 1984, 1987-1988, 1991-1995, 1998-2003, 2005-2015	Regurgitation, Stomach	689	531
RLKI	Juvenile	1999	Stomach	1	0
UUUU	Chick	1976-1977	Bill load, Unknown	3	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>St. Lazaria</u>					
FTSP	Chick	1995-1998, 2001-2015	Regurgitation	357	50
FTSP	Unknown	2010	Regurgitation	1	0
LHSP	Chick	1995-1998, 2000-2015	Regurgitation	562	59
UNST	Chick	1995, 1998, 2005, 2008	Regurgitation	11	0
PECO	Chick	1998, 2000-2001, 2004-2009, 2014-2015	Bolus	122	289
RHAU	Chick	1994-2015	Bill load	1229	1
TUPU	Chick	1996, 2015	Bill load	17	1
GWGU	Adult	2003, 2015	Pellet, Stomach	83	0
GWGU	Chick	2002, 2006, 2010-2012	Regurgitation	11	7
<u>St. Matthew</u>					
COMU	Adult	1982-1983, 1985-1986, 1997	Stomach	209	0
COMU	Chick	1982-1983, 1985-1986	Bill load	27	0
TBMU	Adult	1982-1983, 1985-1986, 1997	Stomach	221	0
TBMU	Chick	1982-1983, 1985-1986	Bill load	6	0
PIGU	Adult	1982	Stomach	11	0
PAAU	Adult	1982	Stomach	5	0
PAAU	Chick	1982	Gular	1	0
LEAU	Chick	1982-1983, 1985-1986	Regurgitation, Gular	109	0
CRAU	Chick	1982-1983	Gular	7	0
HOPU	Adult	1982-1983	Stomach	6	0
BLKI	Adult	1982-1983, 1985-1986, 1997	Stomach	177	0
<u>St. Paul</u>					
NOFU	Adult	1978	Stomach	1	0
RFCO	Adult	1975-1979, 1993	Stomach	27	0
RFCO	Chick	1975-1978, 1984, 1996, 1998, 2009-2015	Regurgitation, Bolus	90	68
RFCO	Immature	1975-1976	Stomach	3	0
COMU	Adult	1975-1979, 1984, 1992-1995, 1997-2000, 2008	Stomach, Lavage	148	0
COMU	Chick	1976-1979, 1984, 2008, 2010	Bill load, Regurgitation	109	0
TBMU	Adult	1975-1979, 1984, 1988, 1992-1995, 1997-2000, 2008-2010	Stomach	344	4
TBMU	Chick	1975-1979, 1984, 1987-1988, 2000, 2008-2010	Bill load, Regurgitation, Stomach, Unk.	1005	0
UNMU	Chick	1975-1977	Bill load, Stomach	13	0
PAAU	Adult	1975-1978	Stomach	42	0
PAAU	Chick	1976-1977, 1996, 2009	Gular, Regurgitation	40	0
LEAU	Adult	1975-1978, 1984	Stomach	93	0
LEAU	Chick	1975-1978, 1984, 1986, 1989, 1996-2001, 2003-2015	Regurgitation, Gular	782	12
CRAU	Adult	1975-1977	Stomach	10	0
CRAU	Chick	1976-1977, 2009	Gular, Regurgitation	22	0
HOPU	Adult	1975-1979, 1984	Stomach	37	0
HOPU	Chick	1976-1979, 1984	Bill load	26	0
TUPU	Adult	1975-1979	Stomach	27	0
TUPU	Chick	1976, 1979	Bill load	8	0
BLKI	Adult	1975-1979, 1984, 1992-1995, 1997-2000	Stomach	334	0
BLKI	Adult+Chick	2008-2009	Regurgitation, Lavage	32	0
BLKI	Chick	1975-1979, 1984-1985, 1987-1988, 1997-1998, 2000, 2003, 2006, 2008-2012	Regurgitation, Stomach	555	0
BLKI	Immature	1984	Stomach	1	0
RLKI	Adult	1975-1979, 1984, 1992, 1994, 1997	Stomach	120	0
RLKI	Chick	1976-1977, 1979, 2006-2007, 2010	Regurgitation, Unknown	34	0
UNKI	Chick	1975	Regurgitation	1	0
GWGU	Adult	1978	Stomach	9	0
UUUU	Chick	1976-1977	Bill load, Unknown	8	0

Table 3 (continued). Complete list of avian (mostly seabird) diet datasets from the Alaska Maritime National Wildlife Refuge, presented by site in alphabetical order. Datasets summarized in this report (those with ≥ 5 years data or ongoing sampling) are shown in red; additional datasets that exist but are not summarized in this report (those with < 5 years data and not ongoing sampling) are shown in black. Years in parentheses indicate all samples from that year were empty.

Species ^a	Recipient	Years	Diet type	# samples with data	# pending analysis
<u>Sukliik</u>					
NOFU	Adult	1994	Stomach	4	0
RFCO	Adult	1994	Stomach	1	0
PECO	Adult	1994	Stomach	2	0
BLOY	Adult	1994	Stomach	1	0
COMU	Adult	1993-1994	Stomach	4	0
PIGU	Adult	1993	Stomach	3	0
PAAU	Adult	1994	Stomach	5	0
HOPU	Adult	1993-1994	Stomach	18	0
HOPU	Chick	1979, 1985-1987, 1991-1995, 2014	Bill load, Unknown	1286	0
TUPU	Adult	1993-1994	Stomach	20	0
TUPU	Chick	1979, 1985-1987, 1991-1995, 2014-2015	Bill load	2617	0
UNPU	Chick	1994	Bill load	1	0
BLKI	Adult	1993-1994	Stomach	3	0
<u>SW Lighthouse</u>					
NOFU	Adult	1991	Stomach	7	0
COMU	Adult	1991	Stomach	3	0
CAAU	Adult	1991	Stomach	30	0
TUPU	Adult	1991	Stomach	2	0
<u>Tangagm</u>					
TUPU	Chick	1986	Bill load	49	0
<u>Ugauishak</u>					
TUPU	Chick	1992-1993, 2014	Bill load	133	0
<u>Ulak</u>					
CAAU	Chick	1998	Regurgitation	1	0
<u>Unakwik</u>					
MAMU	Adult	1991	Stomach	13	0
<u>Unalaska</u>					
COMU	Adult	1990	Stomach	1	0
PIGU	Adult	1990	Stomach	4	0
MAMU	Adult	1990	Stomach	12	0
KIMU	Adult	1990	Stomach	3	0
HOPU	Adult	1990, 1992	Stomach	13	0
TUPU	Adult	1992	Stomach	15	0
BLKI	Adult	1990, 1992	Stomach	7	0
<u>Unalga</u>					
TUPU	Chick	2013	Bill load	26	0
<u>Vsevidof</u>					
TUPU	Chick	1994, 2012	Bill load	129	0
<u>Whip</u>					
TUPU	Chick	2013	Bill load	27	0
<u>Yunaska</u>					
TUPU	Adult	1993	Stomach	9	0
<u>Unknown</u>					
NOFU	Unknown	2002	Unknown	19	0
UUUU	Adult	1991	Stomach	2	0

^aSpecies abbreviations follow American Ornithologist Union (AOU) convention: ANMU=ancient murrelet, BLGU=black-headed gull, BLKI=black-legged kittiwake, BLOY=black oystercatcher, CAAU=Cassin's auklet, COEI=common eider, COMU=common murre, CRAU=crested auklet, DCCO=double-crested cormorant, FTSP=fork-tailed storm-petrel, GLGU=glaucous gull, GWGU=glaucous-winged gull, HARD=harlequin duck,

HOPU=horned puffin, KIMU=Kittlitz's murrelet, LEAU=least auklet, LHSP=Leach's storm-petrel, MAMU=marbled murrelet, MEGU=mew gull, NOFU=northern fulmar, PAAU=parakeet auklet, PAJA=parasitic jaeger, PECO=pelagic cormorant, PIGU=pigeon guillemot, RFCO=red-faced cormorant, RHAU=rhinoceros auklet, RLKI=red-legged kittiwake, STSH=short-tailed shearwater, TBMU=thick-billed murre, UNKI=unknown kittiwake, UNMU=unknown murre, UNPU=unknown puffin, UNST=unknown storm-petrel, UUUU=unknown species, WHAU=whiskered auklet, WWSC=white-winged scoter.

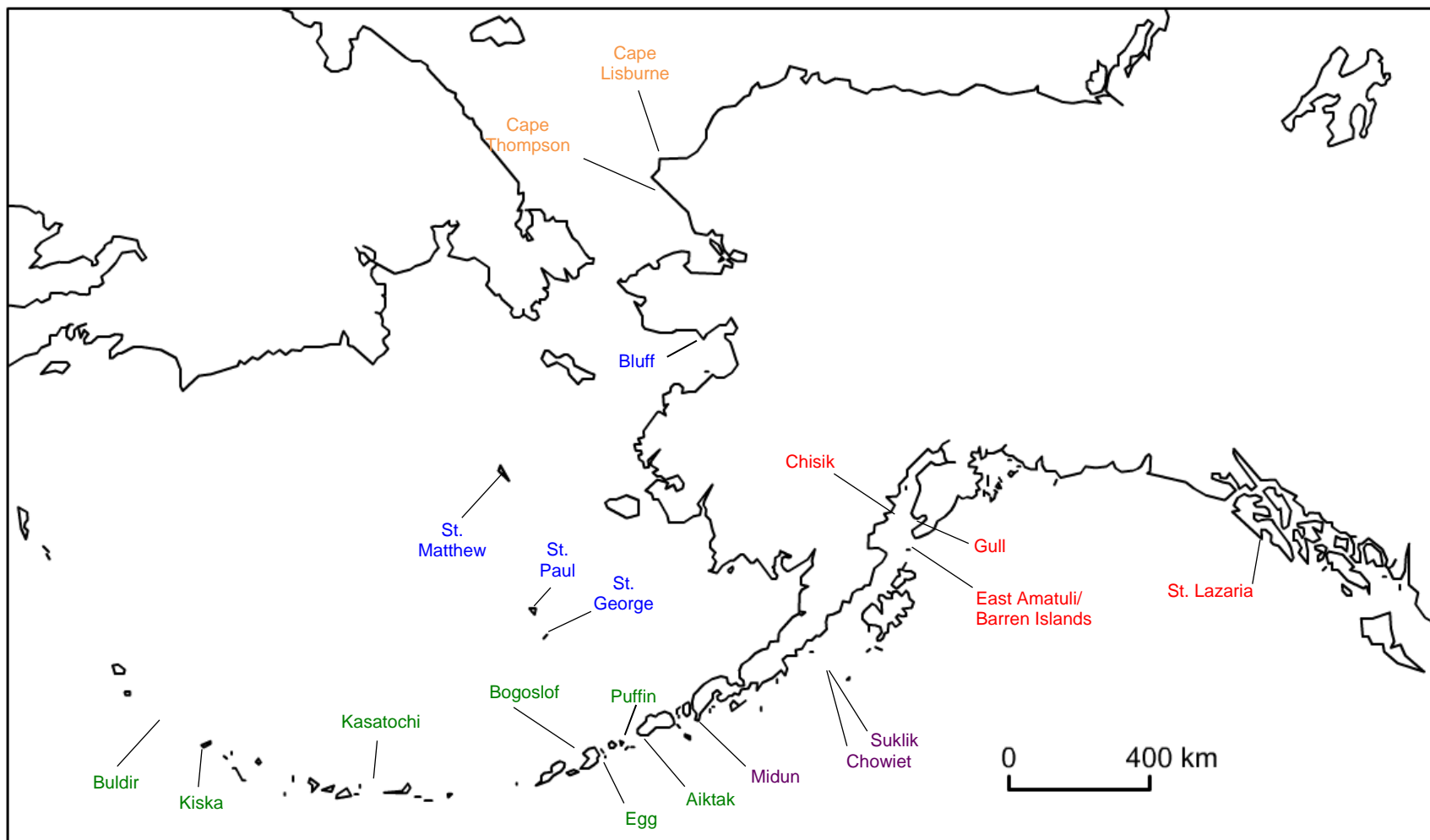


Figure 1. Sites with seabird diet data presented in this report. Colors indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

DIET FIGURES

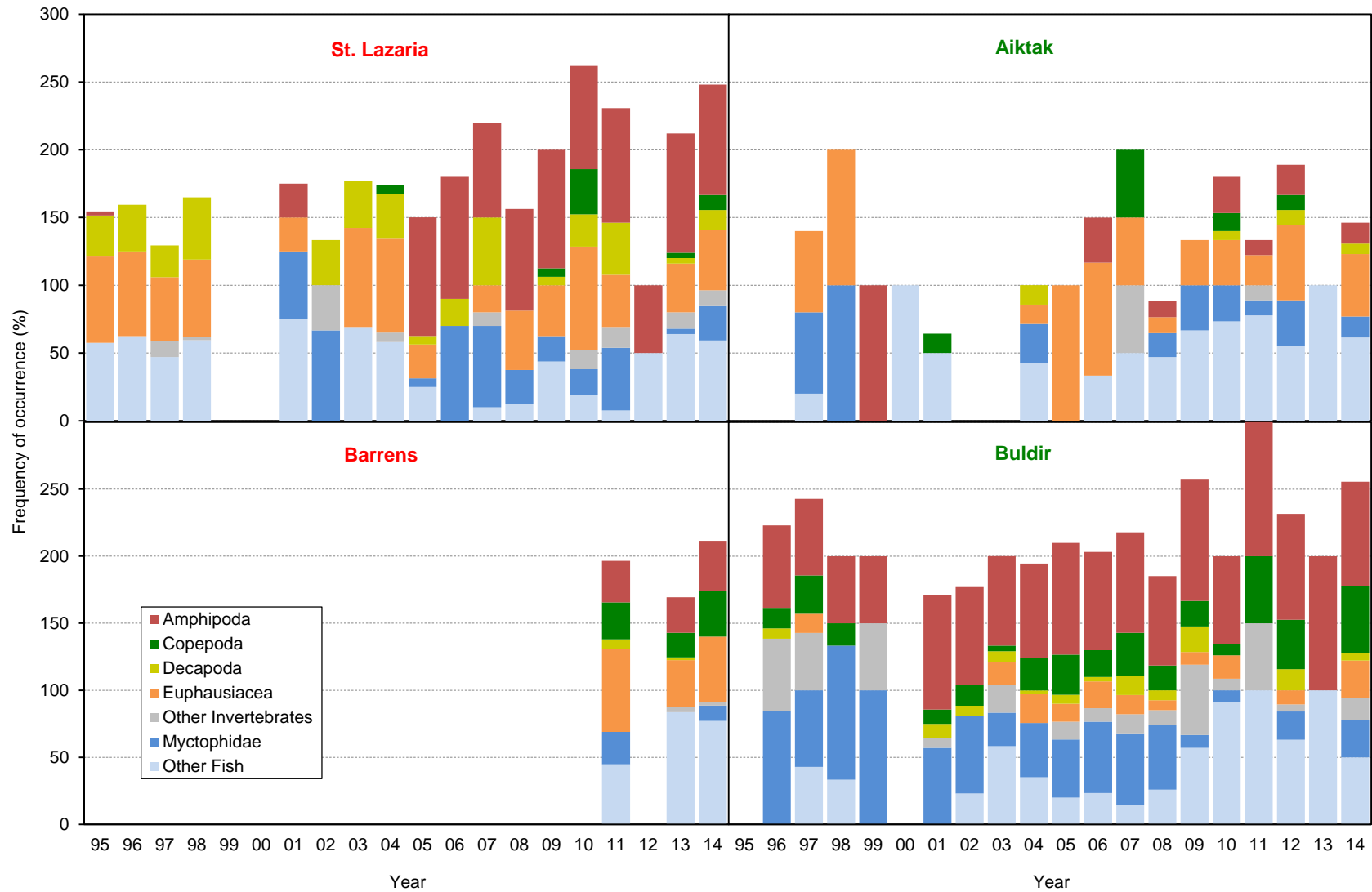


Figure 2. Frequency of occurrence of major prey items in diets of fork-tailed storm-petrel chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands.

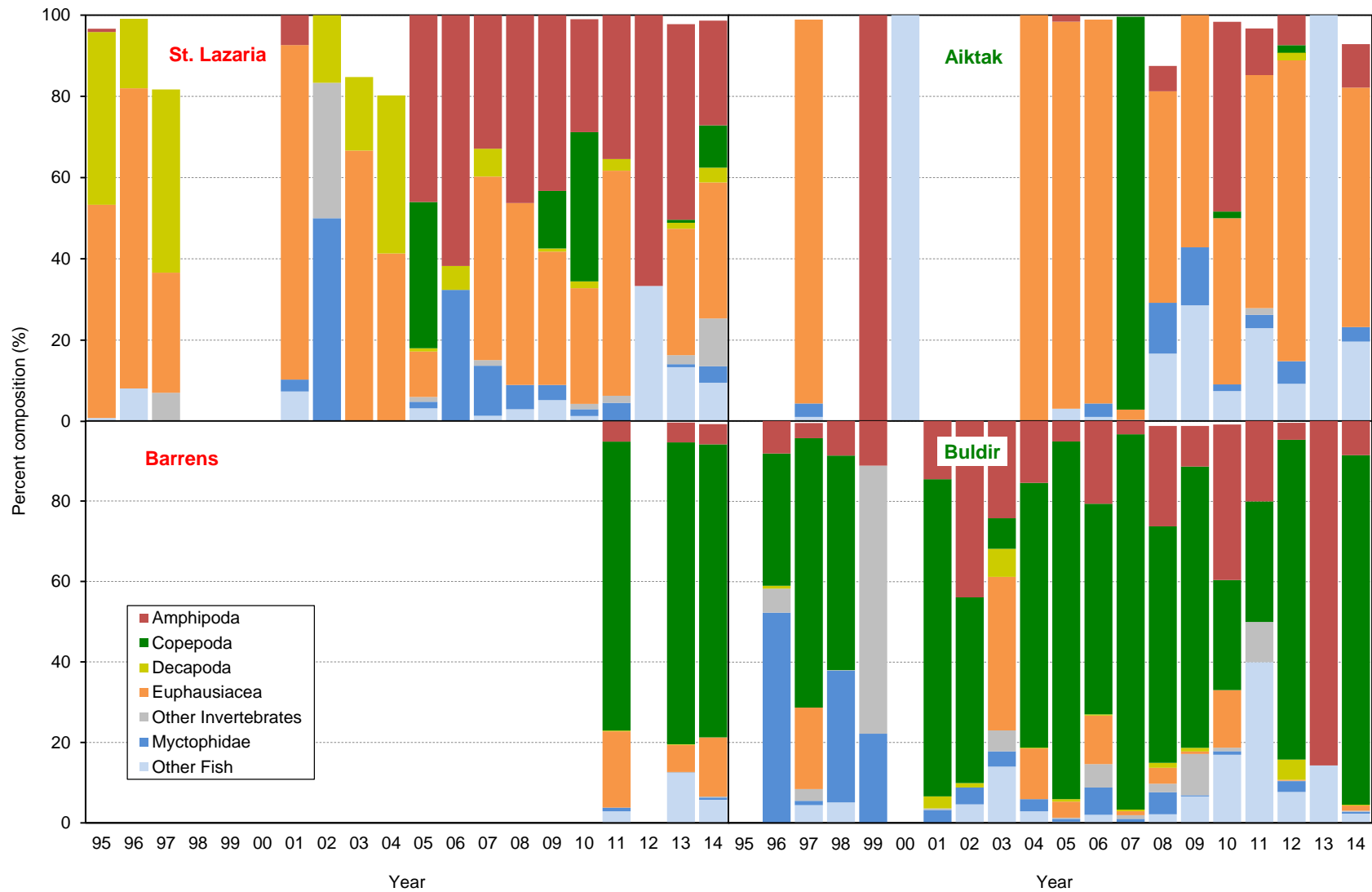


Figure 3. Percent composition of major prey items in diets of fork-tailed storm-petrel chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands.

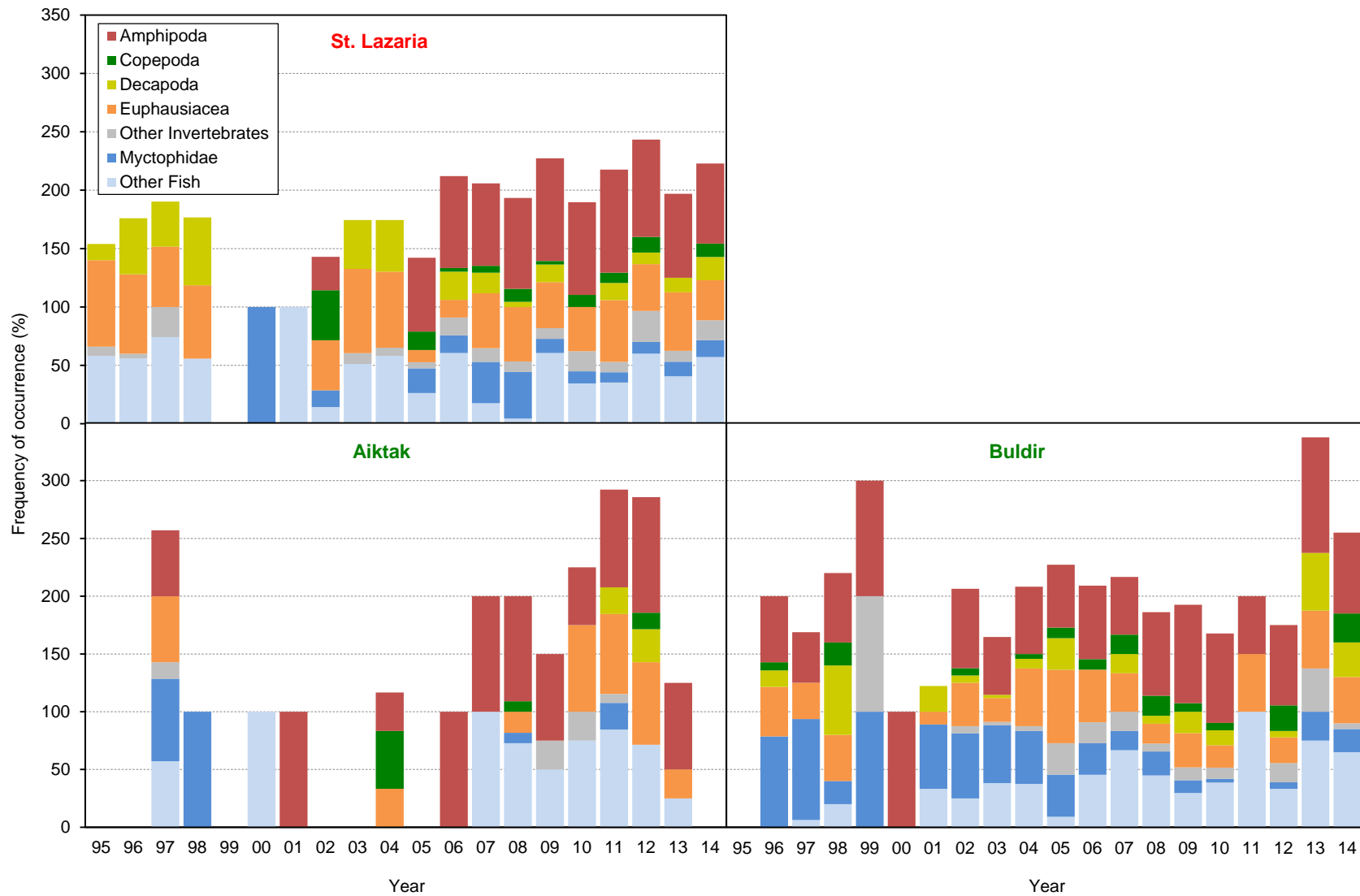


Figure 4. Frequency of occurrence of major prey items in diets of Leach's storm-petrel chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands.

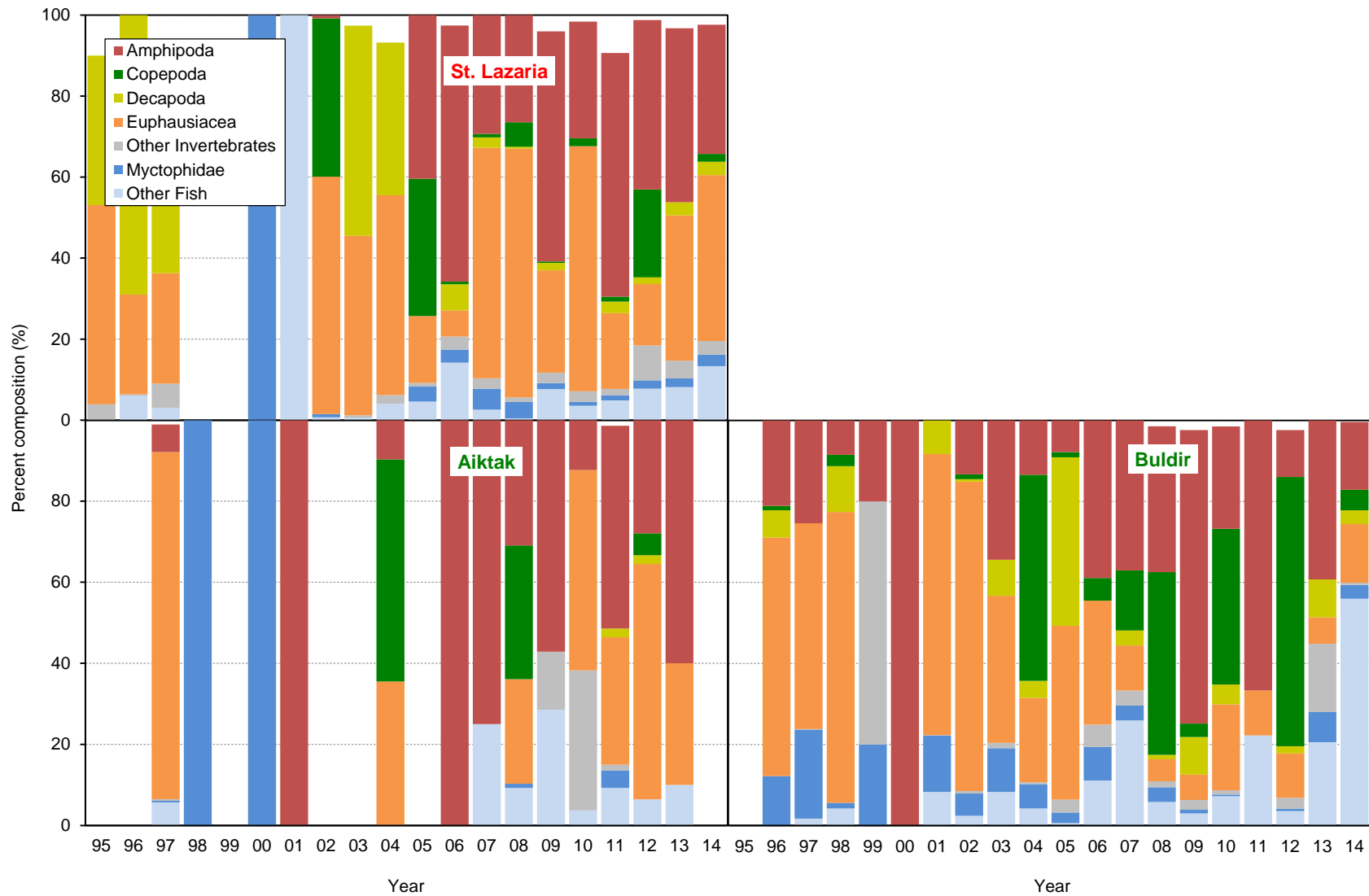


Figure 5. Percent composition of major prey items in diets of Leach's storm-petrel chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands.

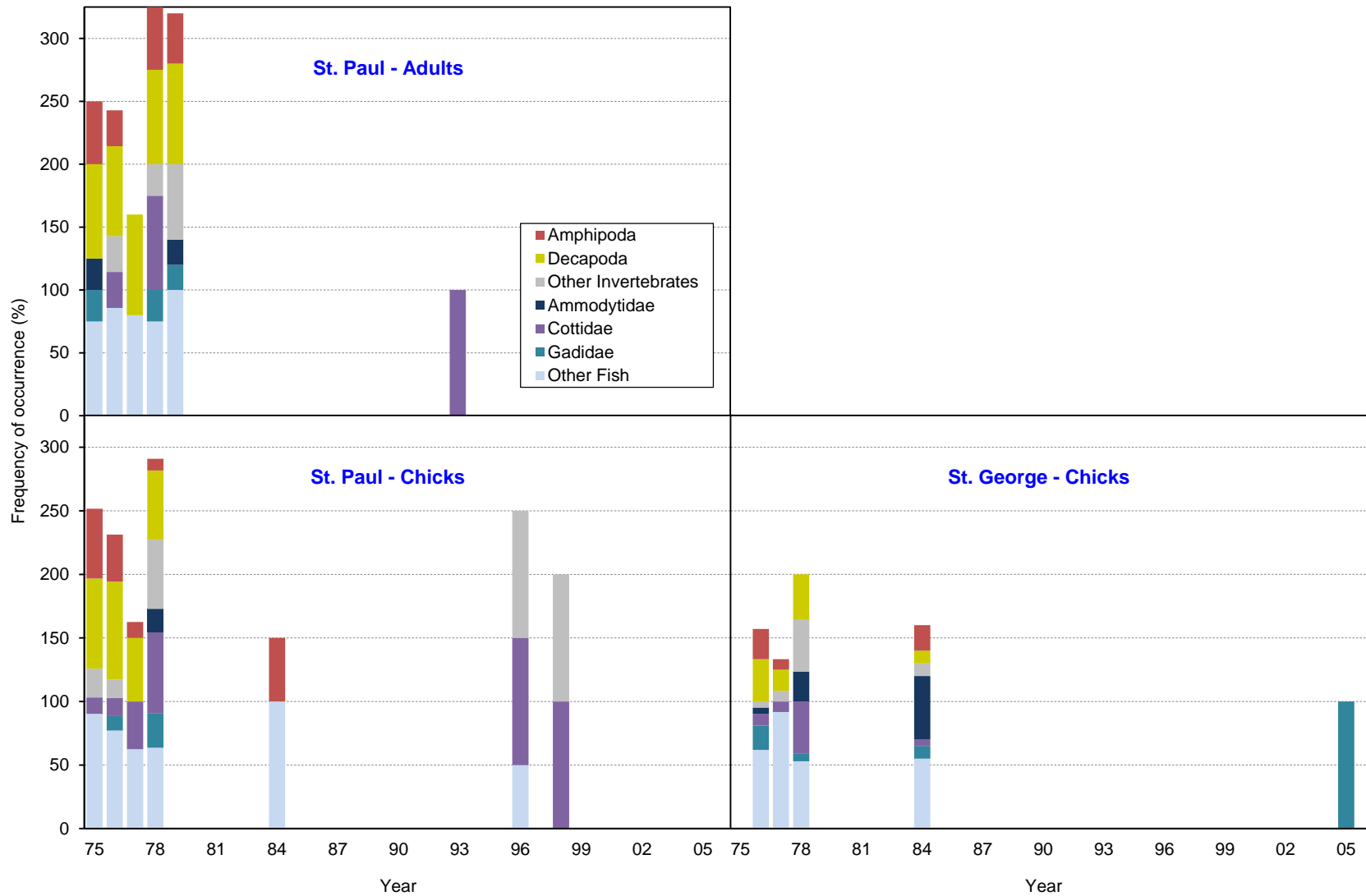


Figure 6. Frequency of occurrence of prey items in diets of red-faced cormorant adults and chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Adult samples consist of stomach contents from adults collected at or near the colony and chick samples consist of boluses collected from the ground and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; blue = Bering Sea.

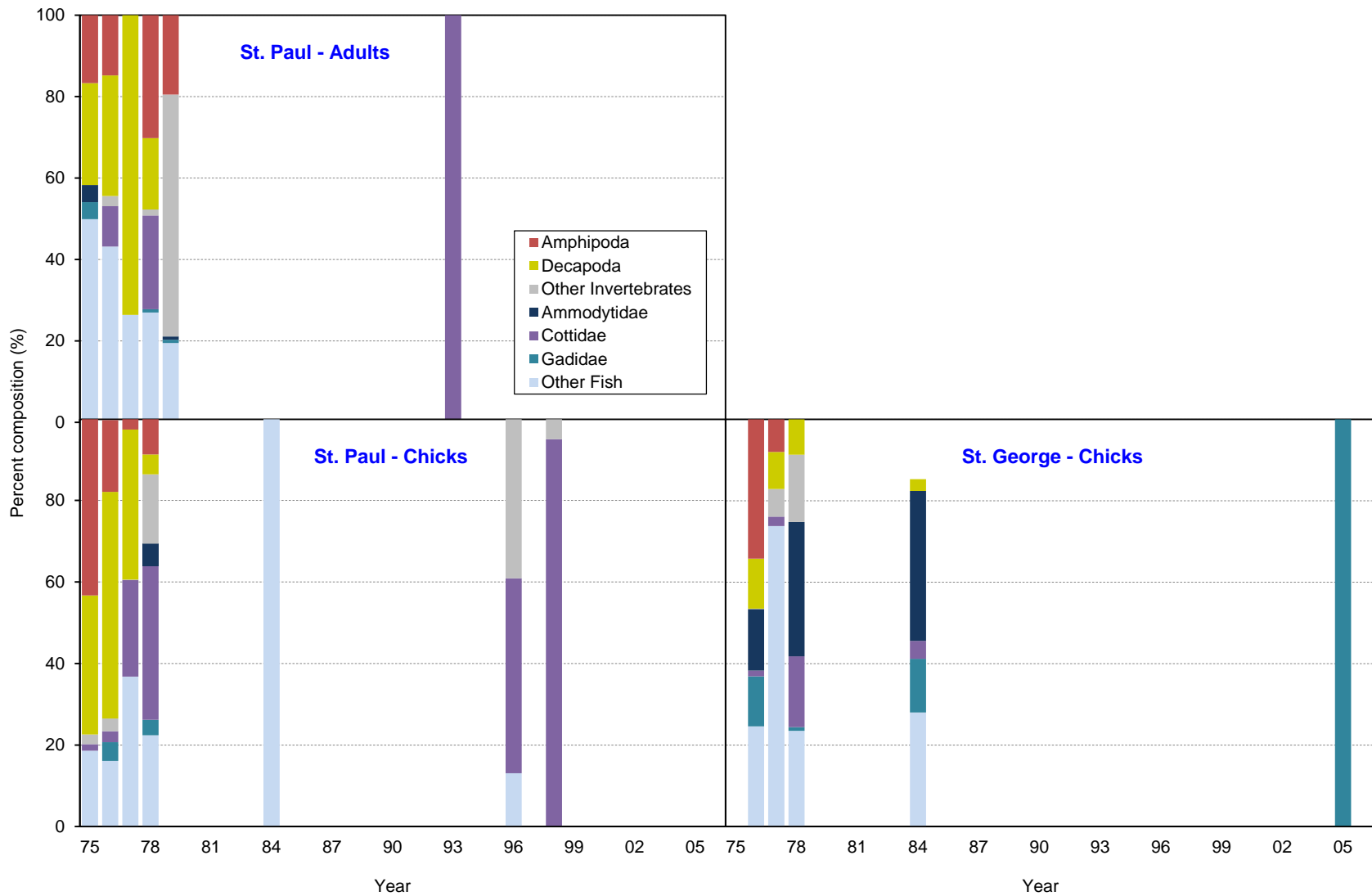


Figure 7. Percent composition of prey items in diets of red-faced cormorant adults and chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Adult samples consist of stomach contents from adults collected at or near the colony and chick samples consist of boluses collected from the ground and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; blue = Bering Sea.

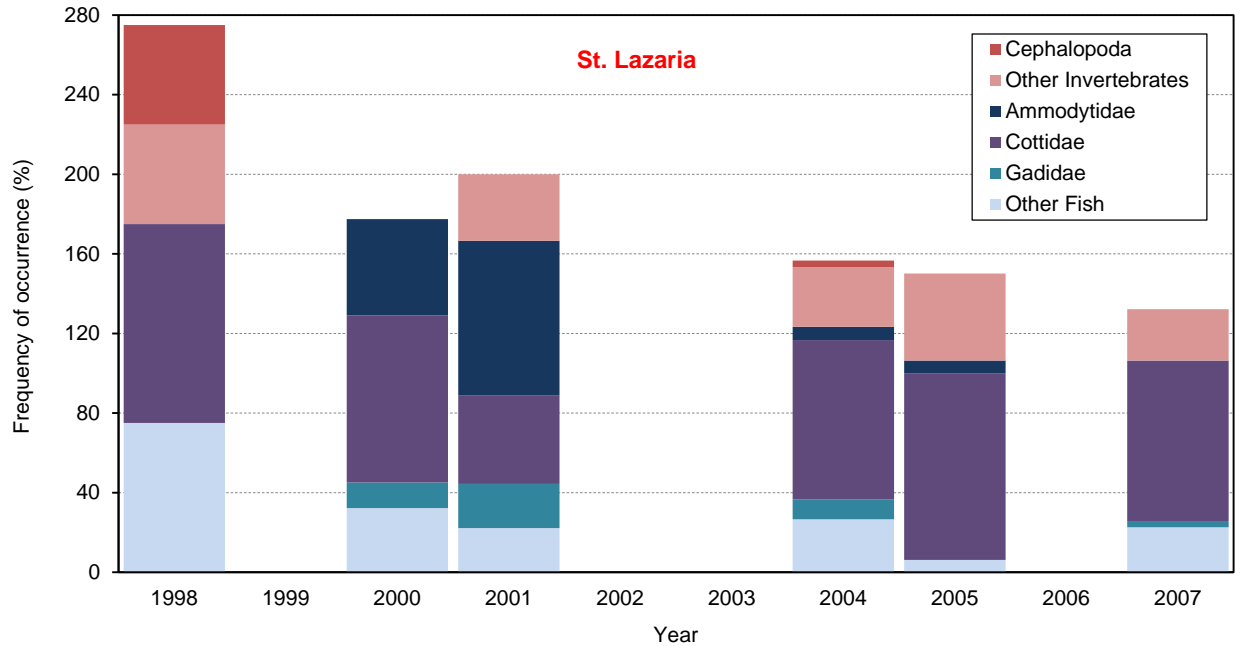


Figure 8. Frequency of occurrence of prey items in diets of pelagic cormorant chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska.

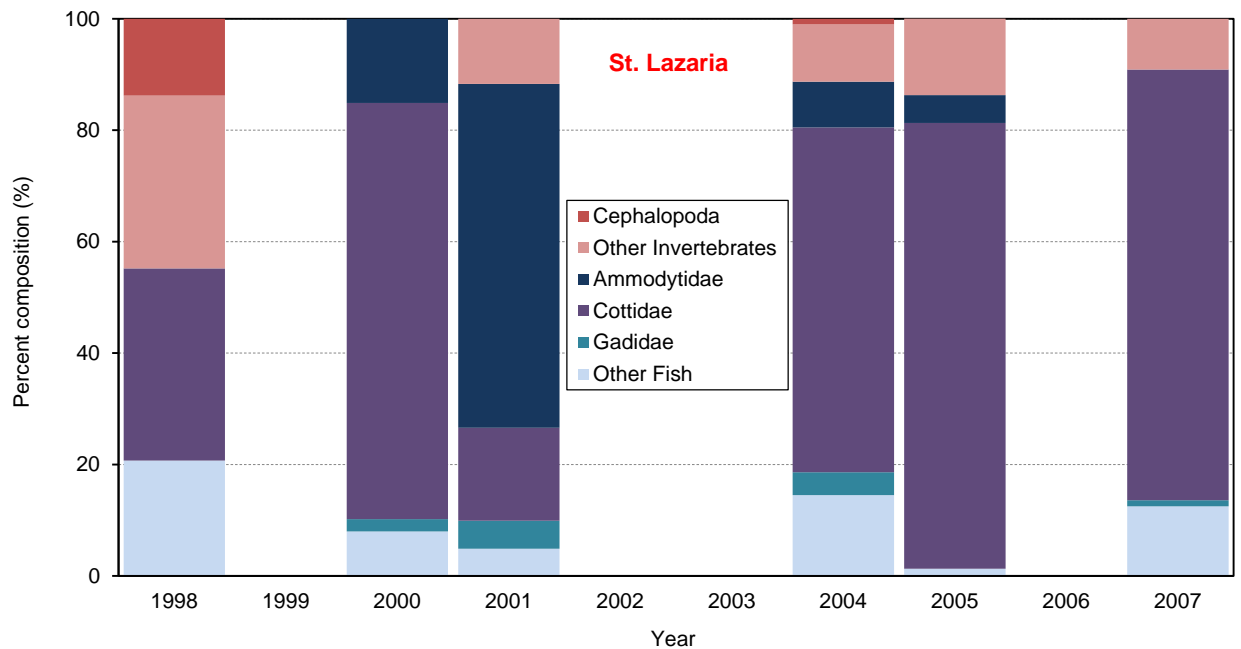


Figure 9. Percent composition of prey items in diets of pelagic cormorant chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska.

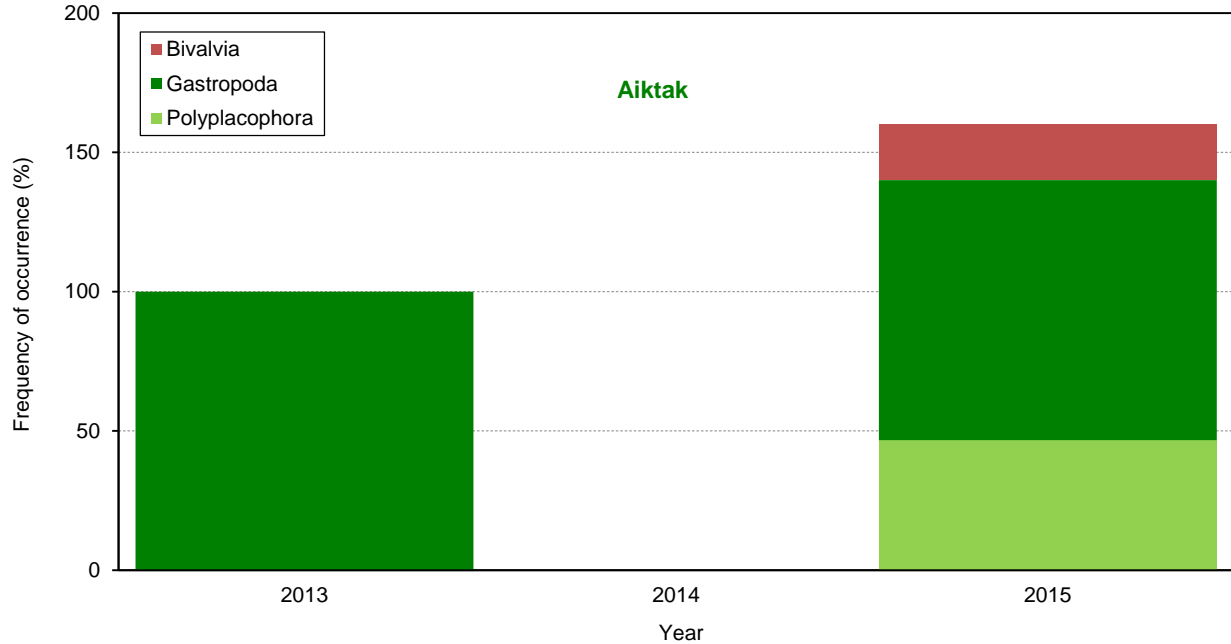


Figure 10. Frequency of occurrence of major prey items in diets of black oystercatcher chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of prey piles collected at nests at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

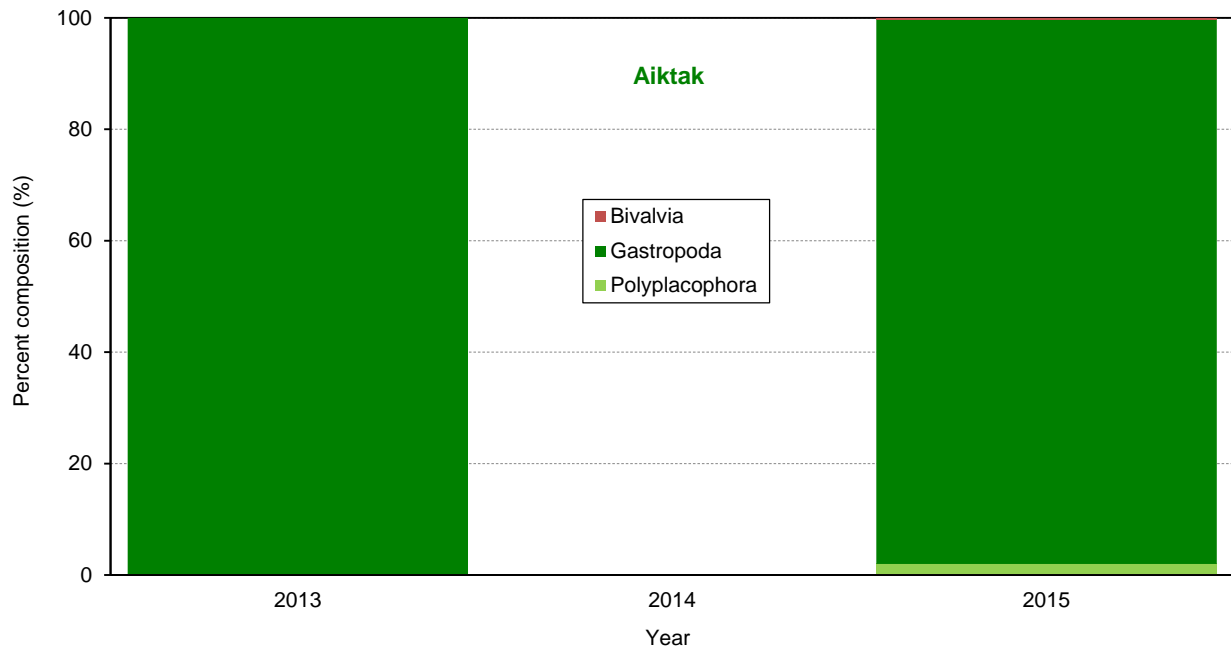


Figure 11. Percent composition of major prey items in diets of black oystercatcher chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of prey piles collected at nests at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

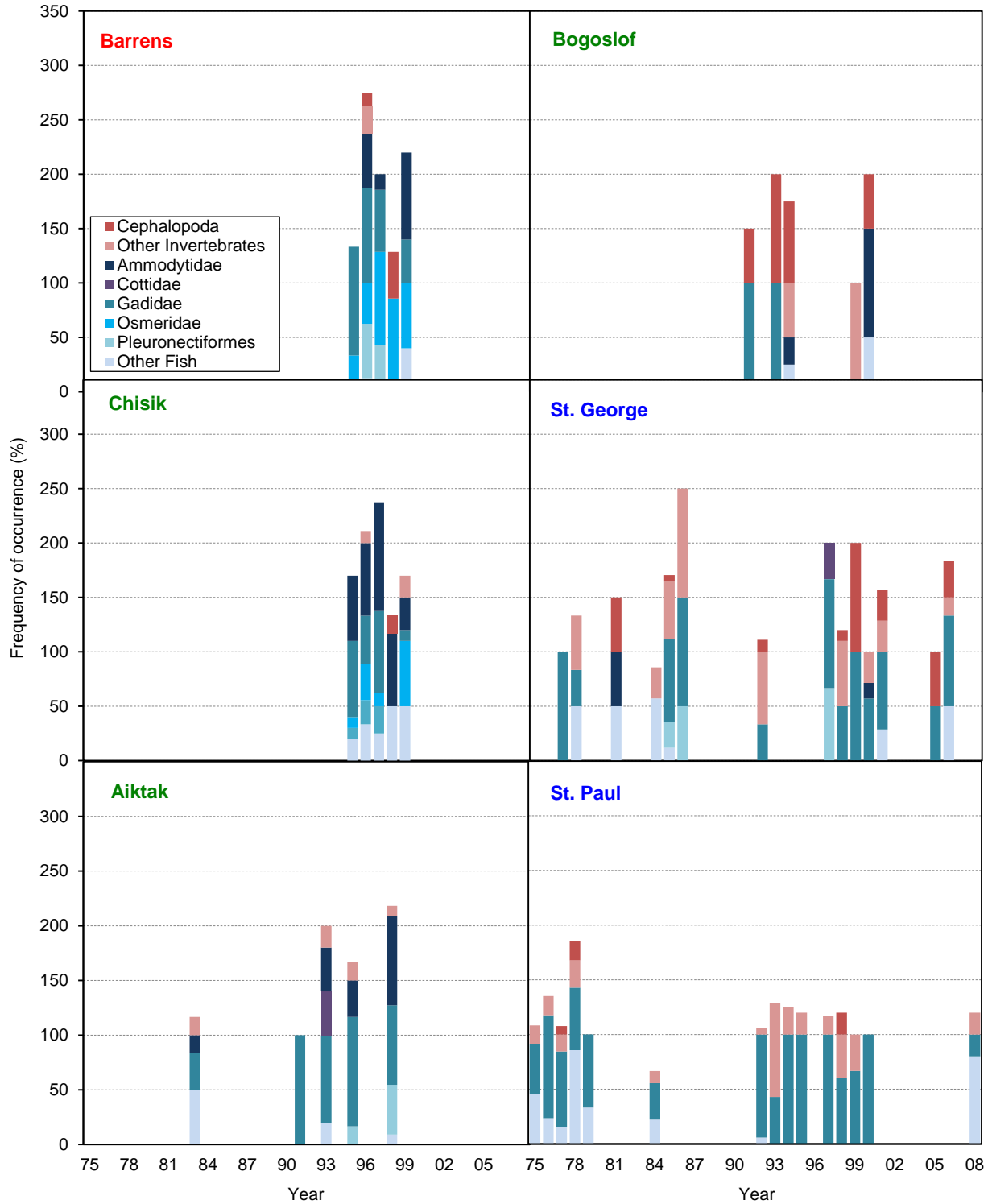


Figure 12. Frequency of occurrence of major prey items in diets of common murre adults at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults collected or lavaged at or near the colony and regurgitation samples from adults; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

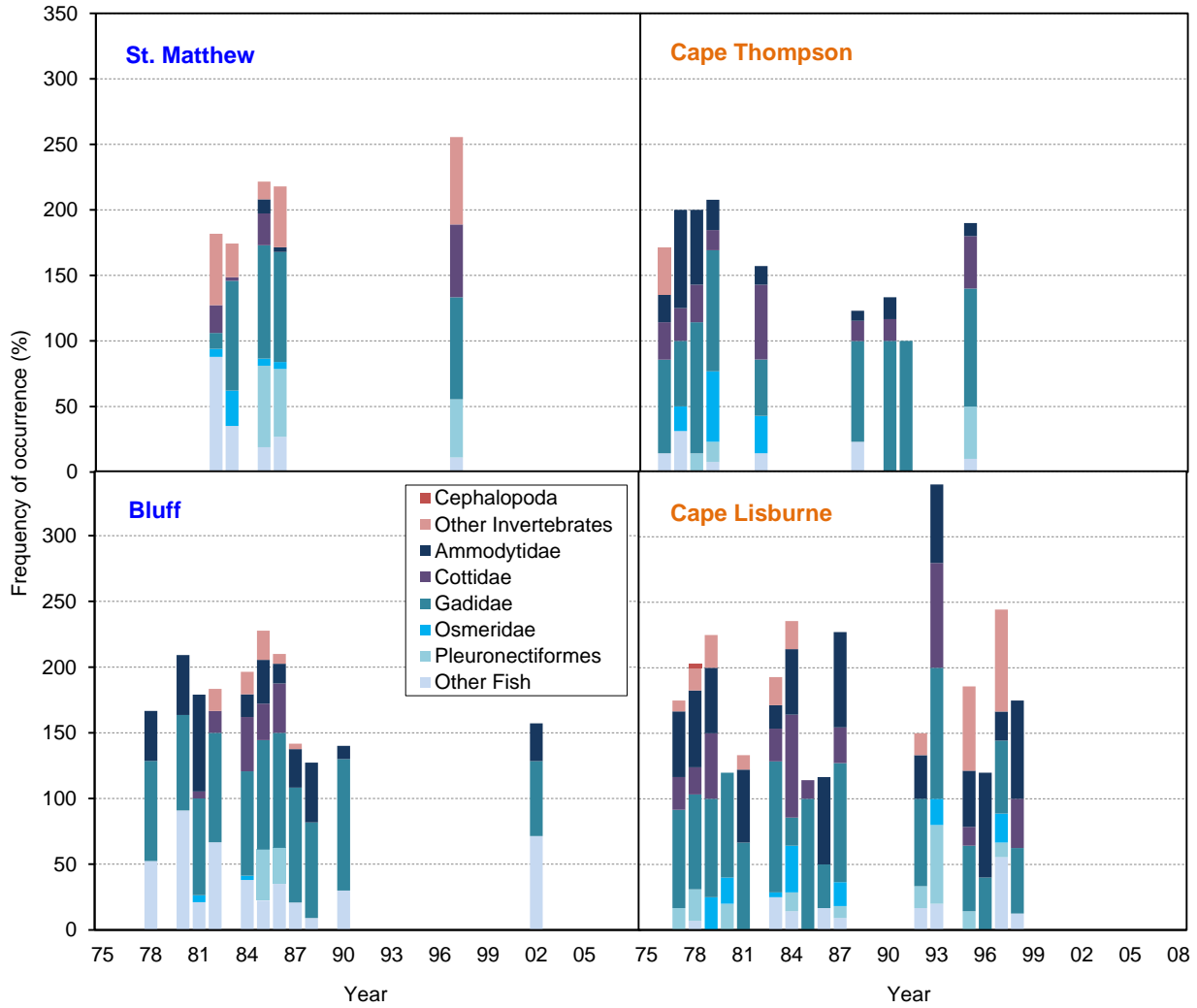


Figure 12 (continued). Frequency of occurrence of major prey items in diets of common murre adults at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults collected or lavaged at or near the colony and regurgitation samples from adults; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

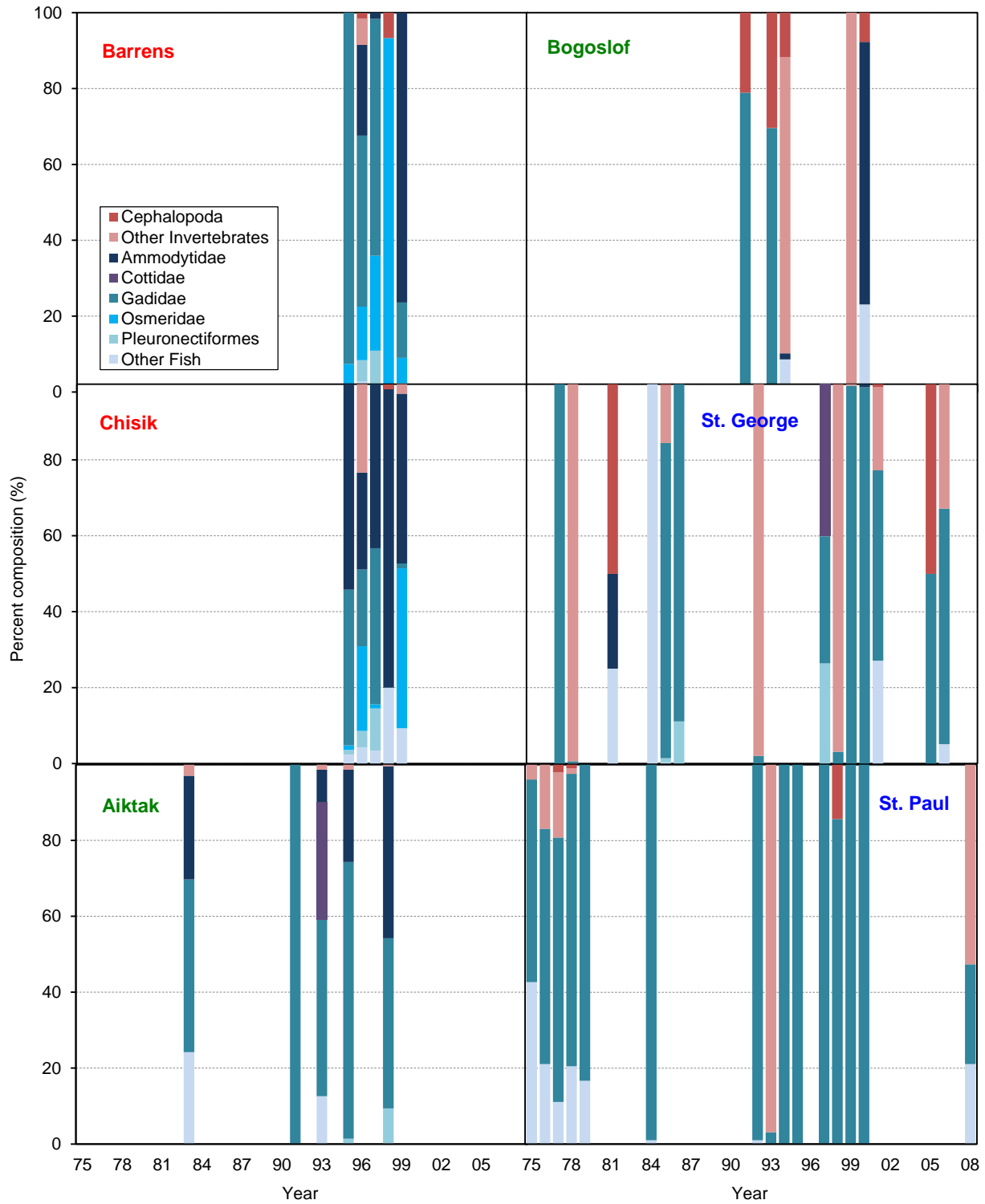


Figure 13. Percent composition of major prey items in diets of common murre adults at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults collected or lavaged at or near the colony and regurgitation samples from adults; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

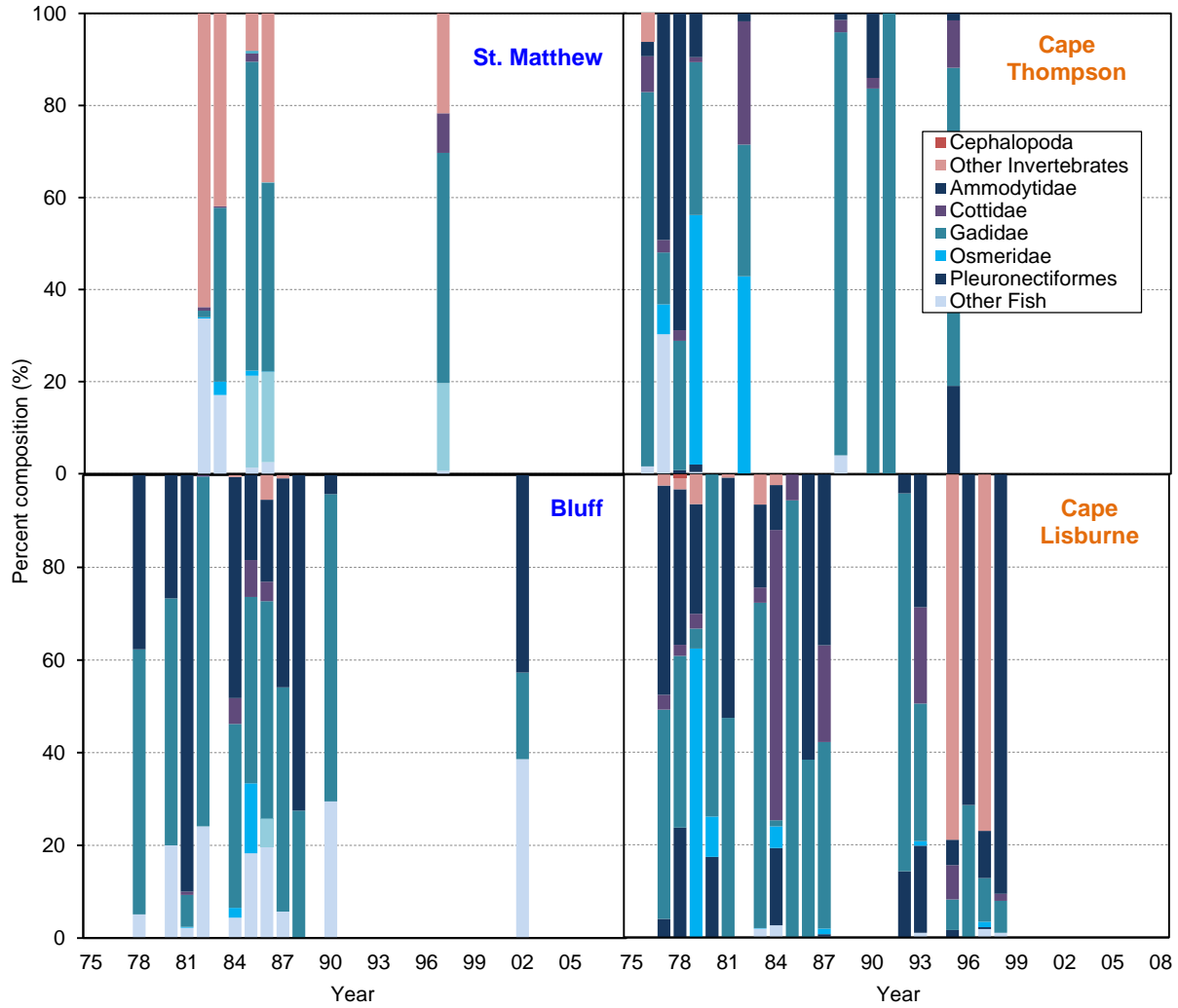


Figure 13 (continued). Percent composition of major prey items in diets of common murre adults at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults collected or lavaged at or near the colony and regurgitation samples from adults; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

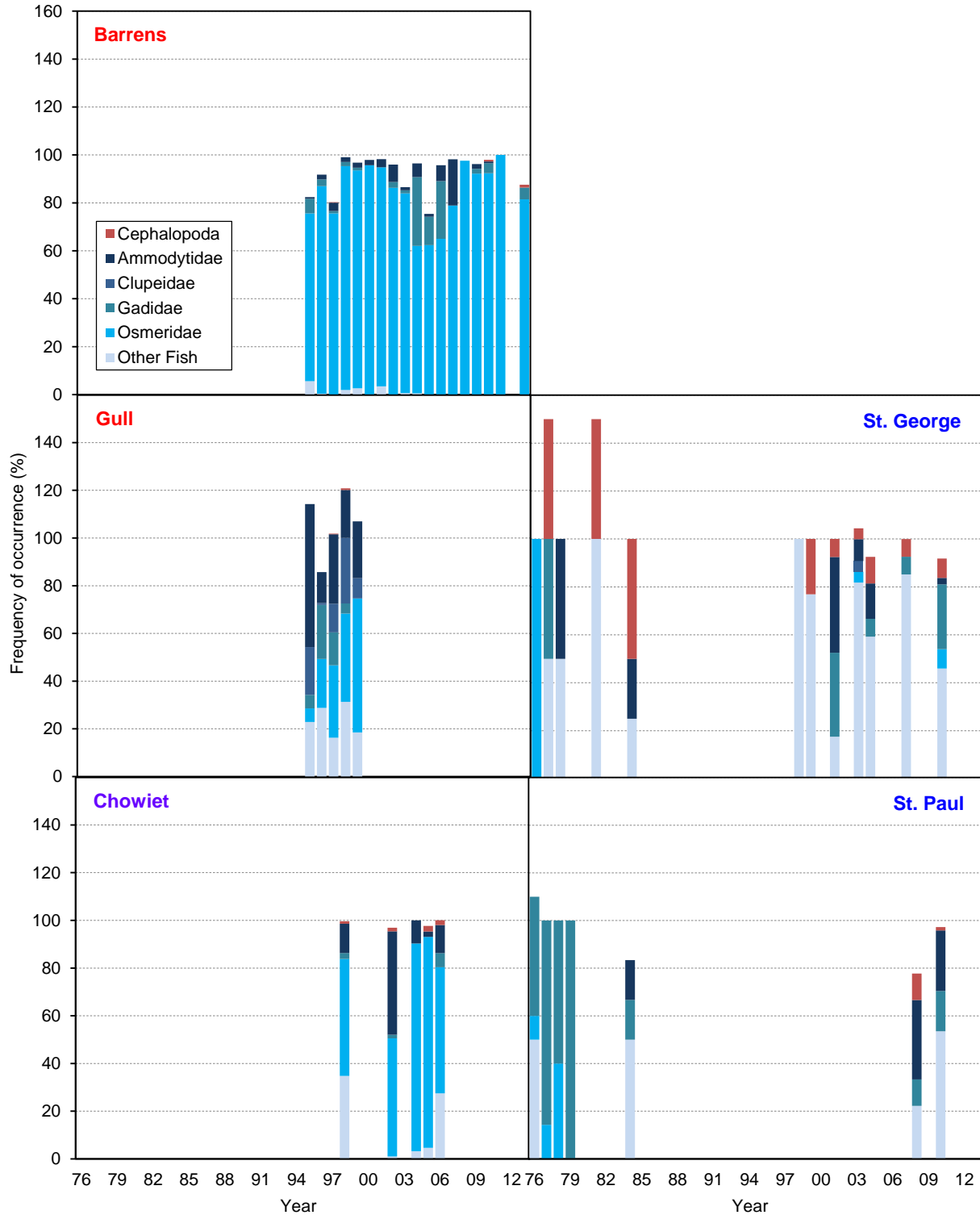


Figure 14. Frequency of occurrence of major prey items in diets of common murre chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of observations of bill loads from adults returning to the colony to feed chicks, collections of bill loads dropped by adults at the colony, and stomach contents and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, blue = Bering Sea.

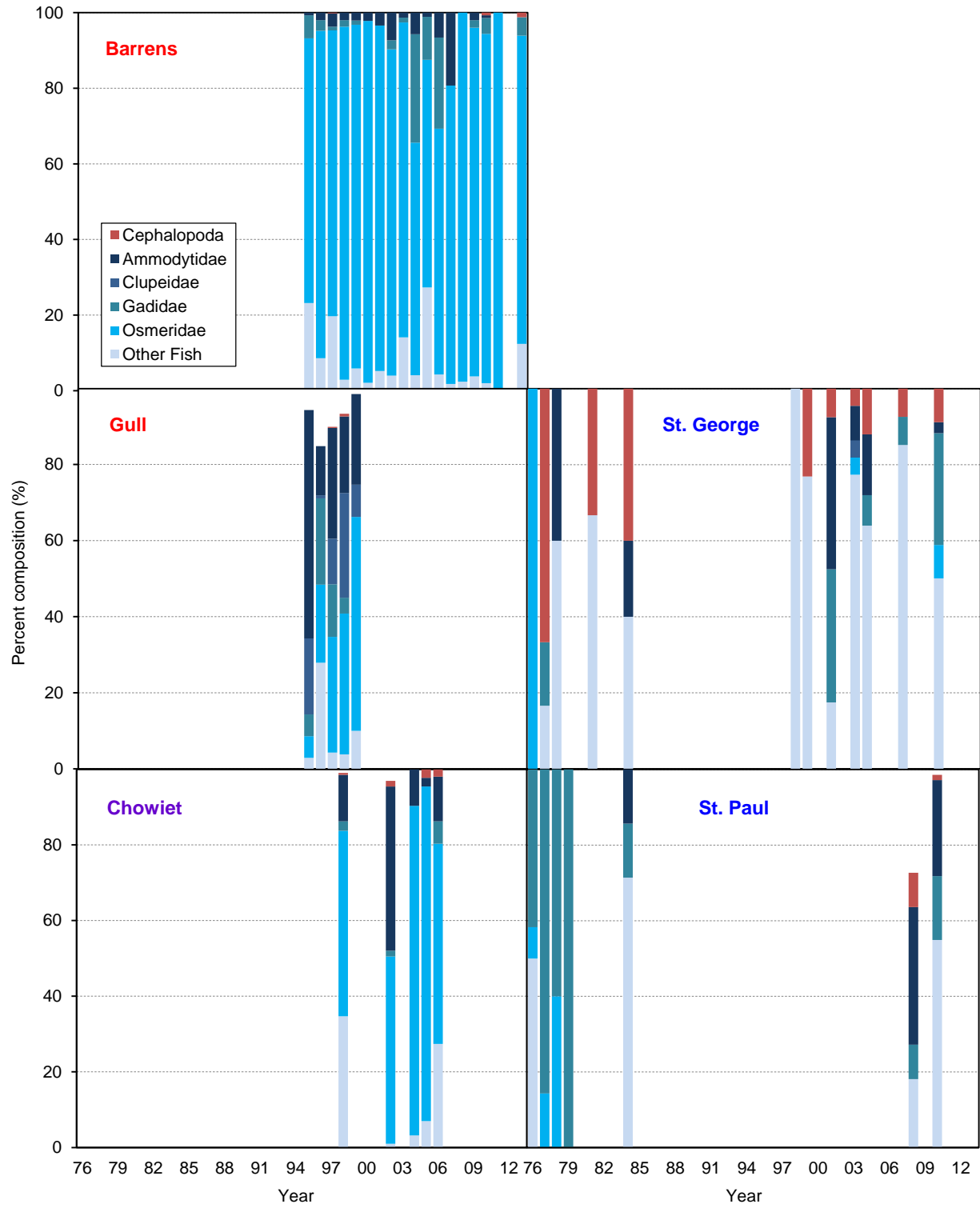


Figure 15. Percent composition of major prey items in diets of common murre chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of observations of bill loads from adults returning to the colony to feed chicks, collections of bill loads dropped by adults at the colony, and stomach contents and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, blue = Bering Sea.

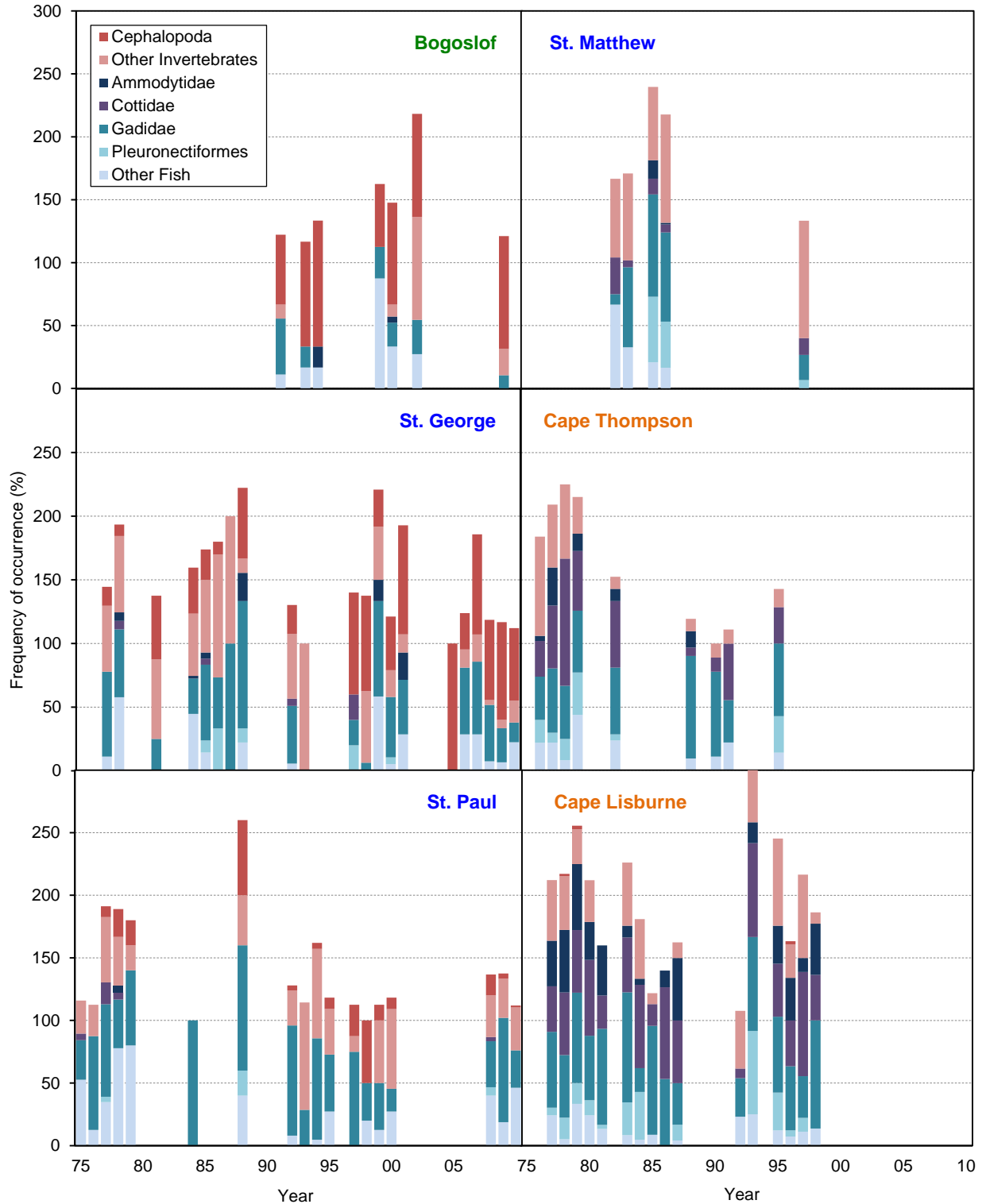


Figure 16. Frequency of occurrence of major prey items in diets of thick-billed murre adults at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults collected or lavaged at or near the colony and regurgitation samples from adults; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

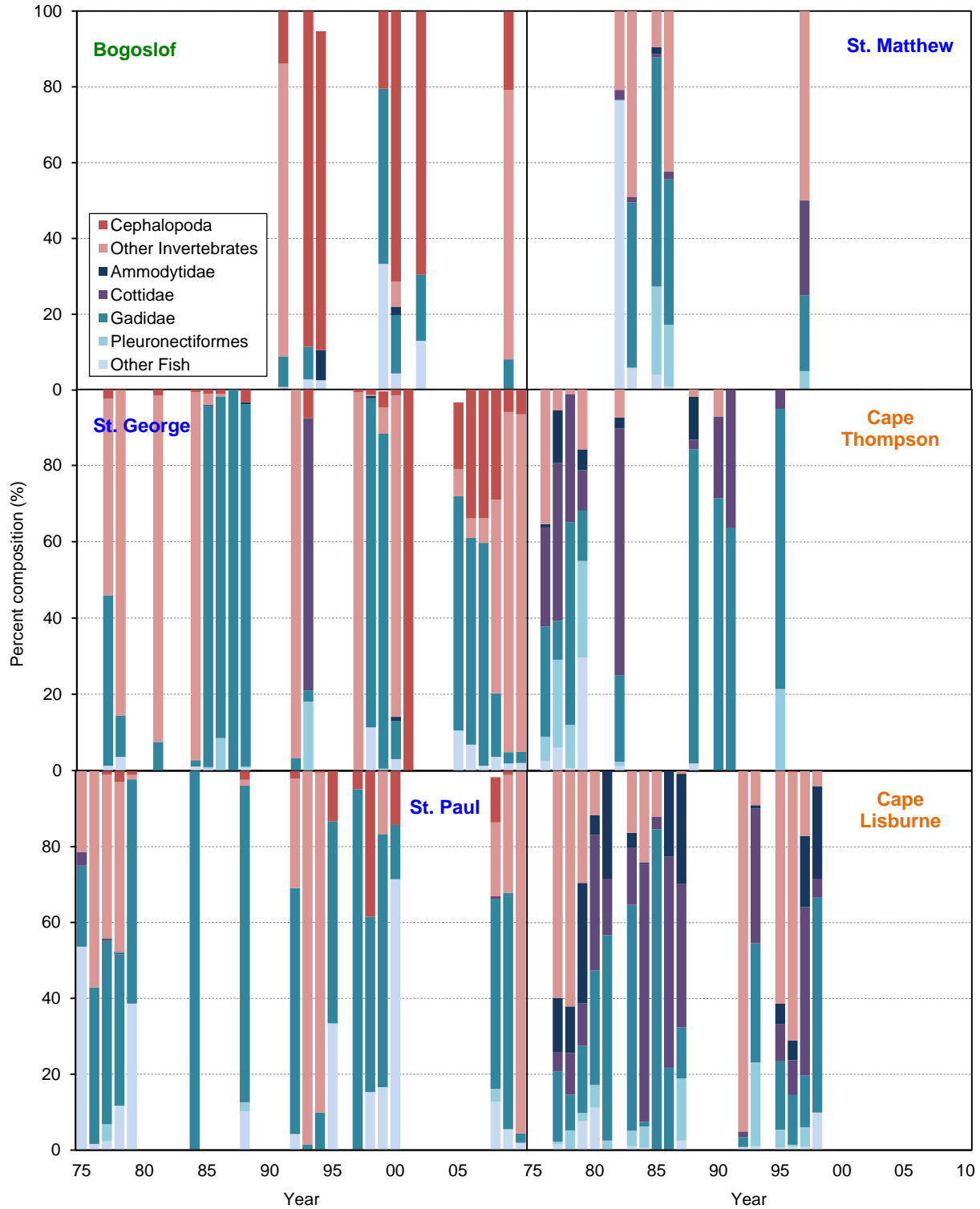


Figure 17. Percent composition of major prey items in diets of thick-billed murre adults at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults collected or lavaged at or near the colony and regurgitation samples from adults; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

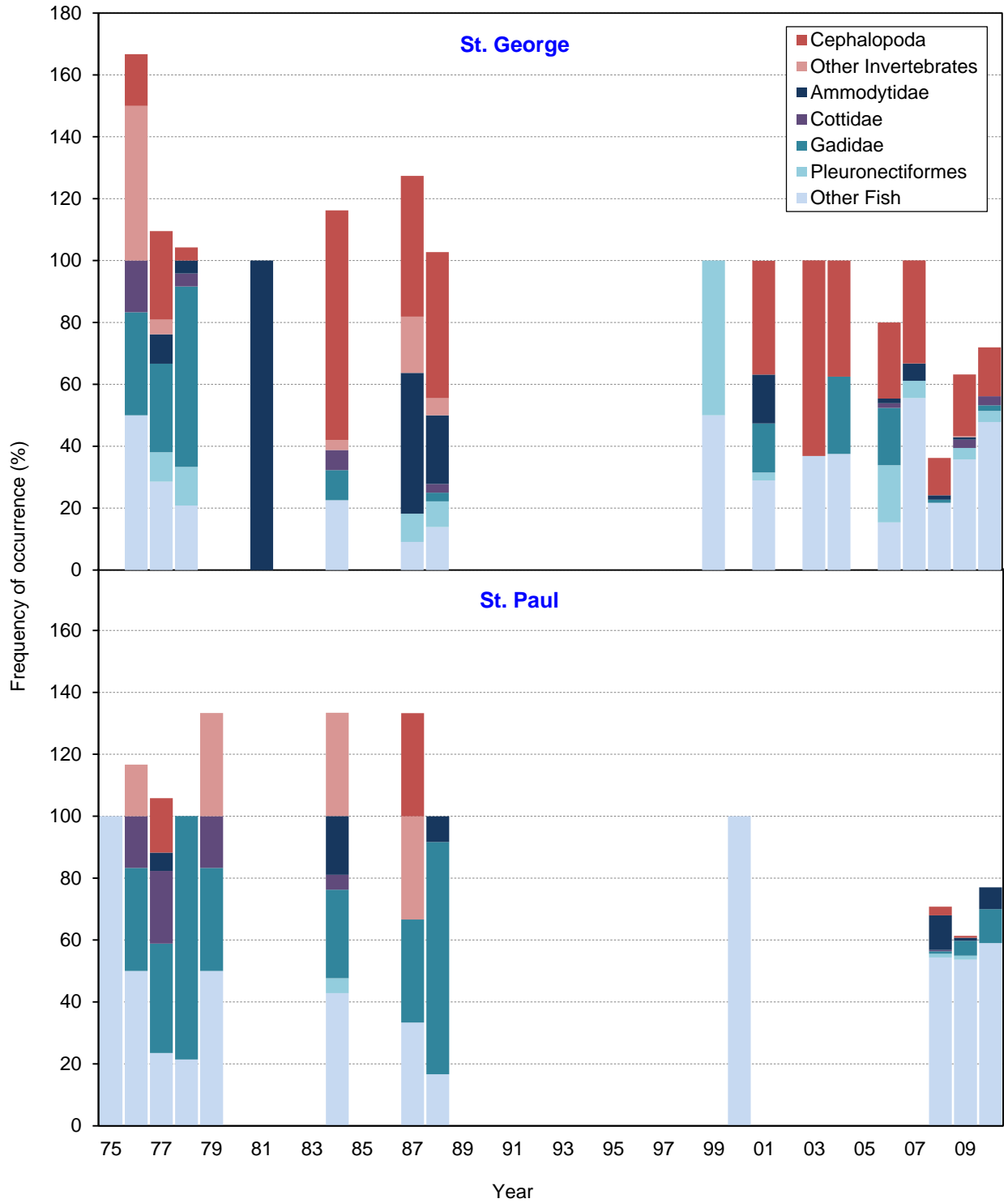


Figure 18. Frequency of occurrence of major prey items in diets of thick-billed murre chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of observations of bill loads from adults returning to the colony to feed chicks, collections of bill loads dropped by adults at the colony and regurgitations collected from chicks at the colony ; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; blue = Bering Sea.

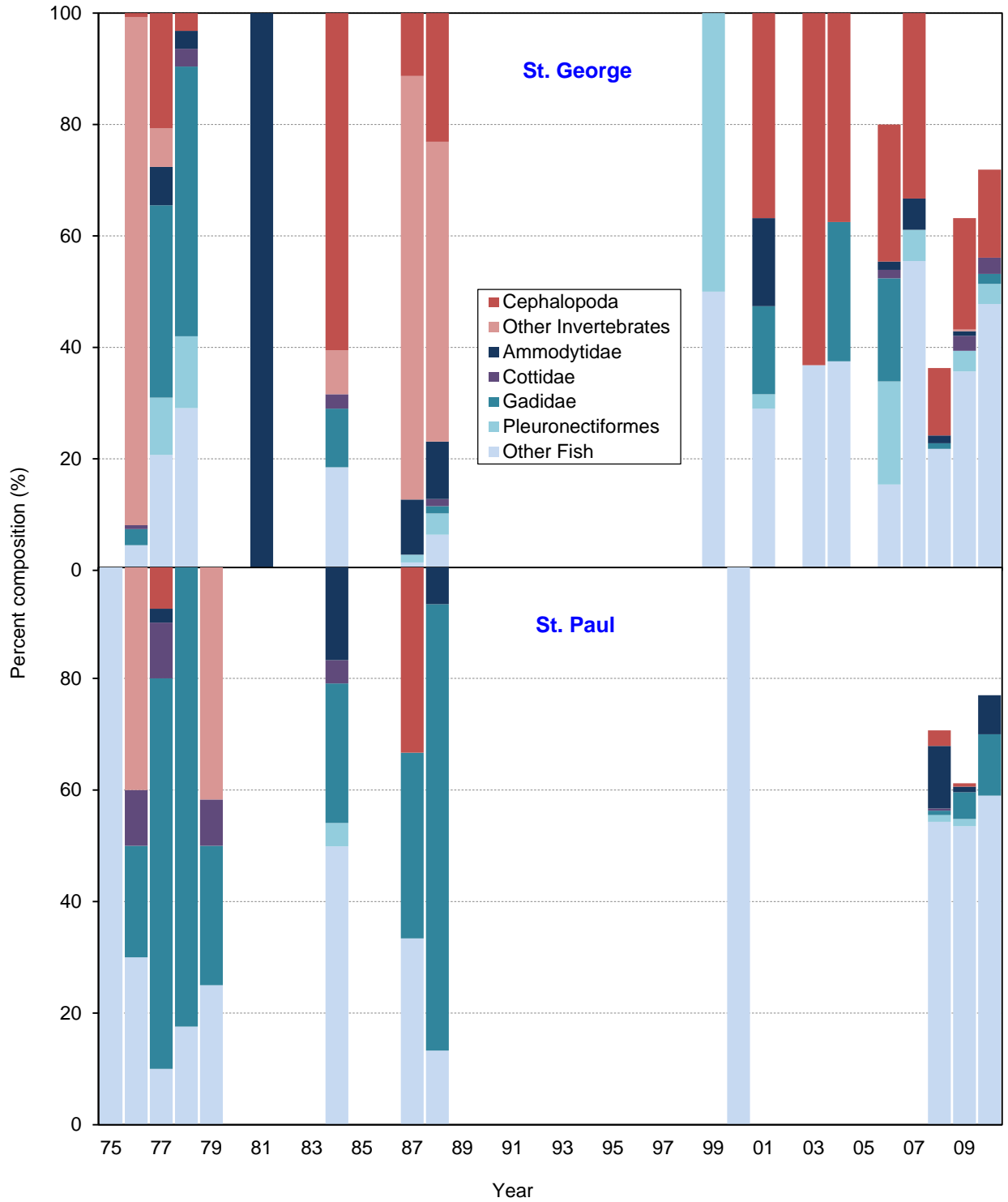


Figure 19. Percent composition of major prey items in diets of thick-billed murre chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of observations of bill loads from adults returning to the colony to feed chicks, collections of bill loads dropped by adults at the colony and regurgitations collected from chicks at the colony ; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; blue = Bering Sea.

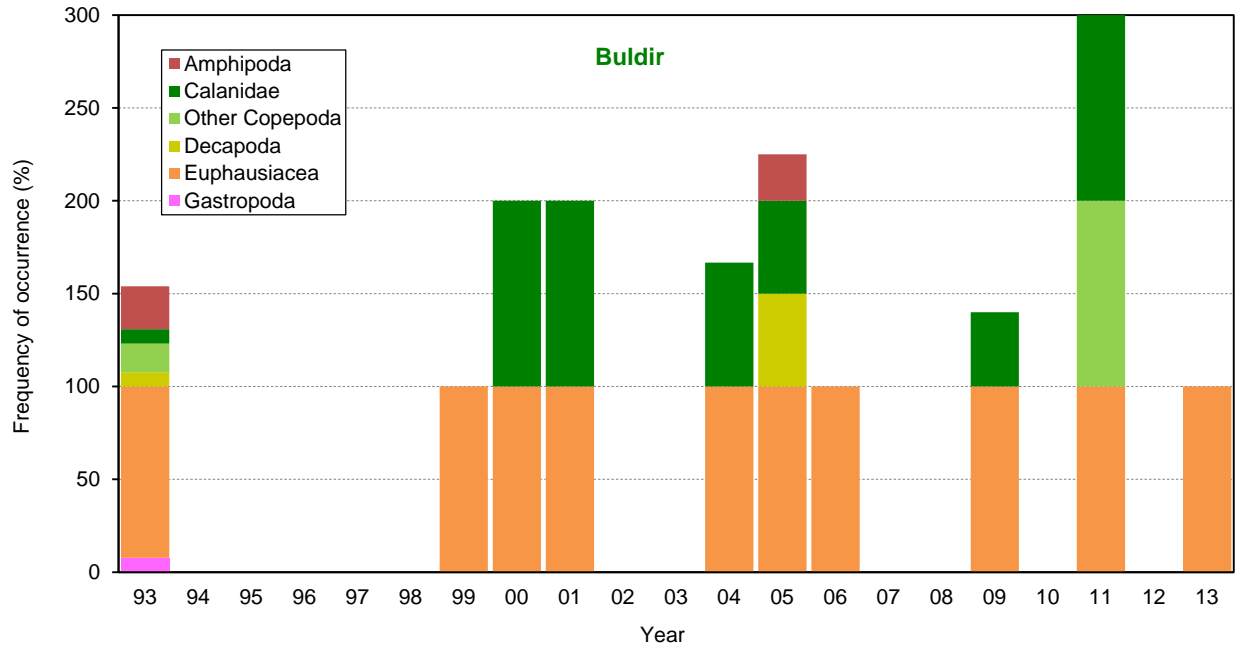


Figure 20. Frequency of occurrence of major prey items in diets of Cassin's auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

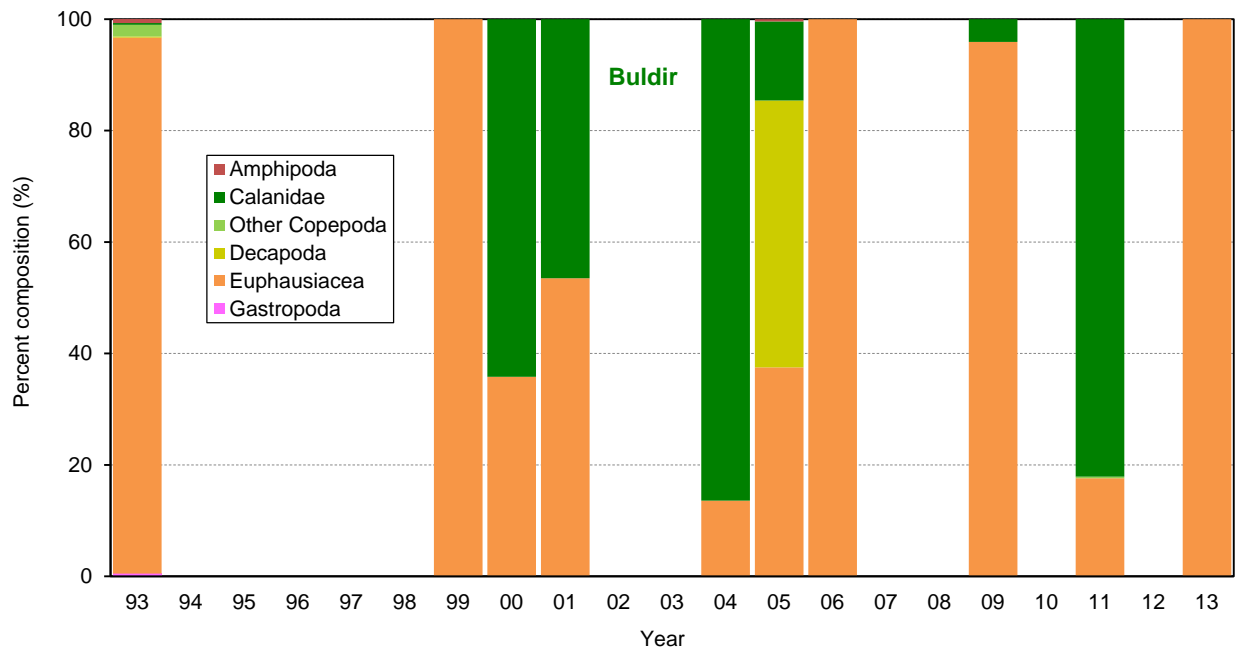


Figure 21. Percent composition of major prey items in diets of Cassin's auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

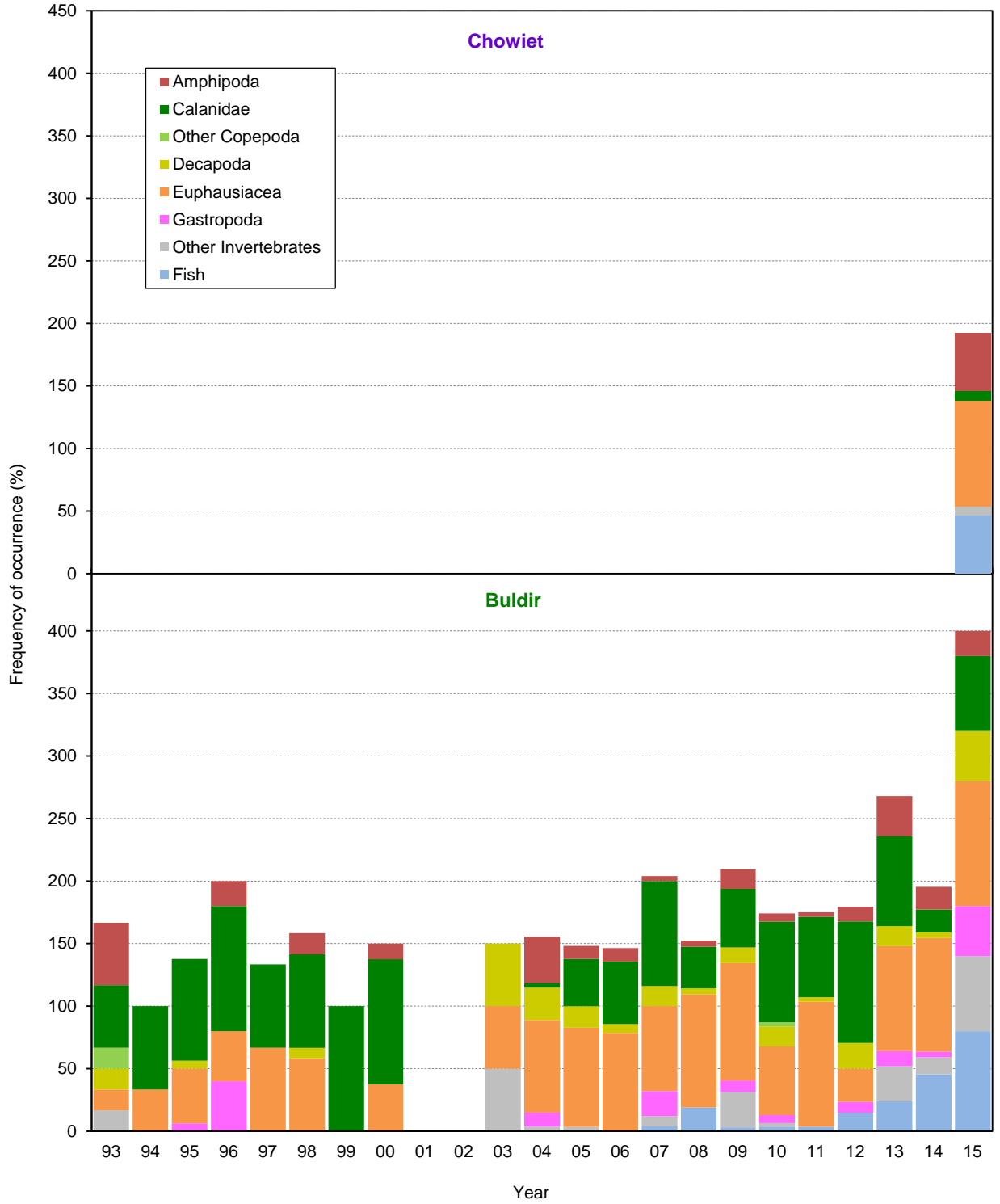


Figure 22. Frequency of occurrence of major prey items in diets of parakeet auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; purple = Alaska Peninsula, green = Aleutian Islands.

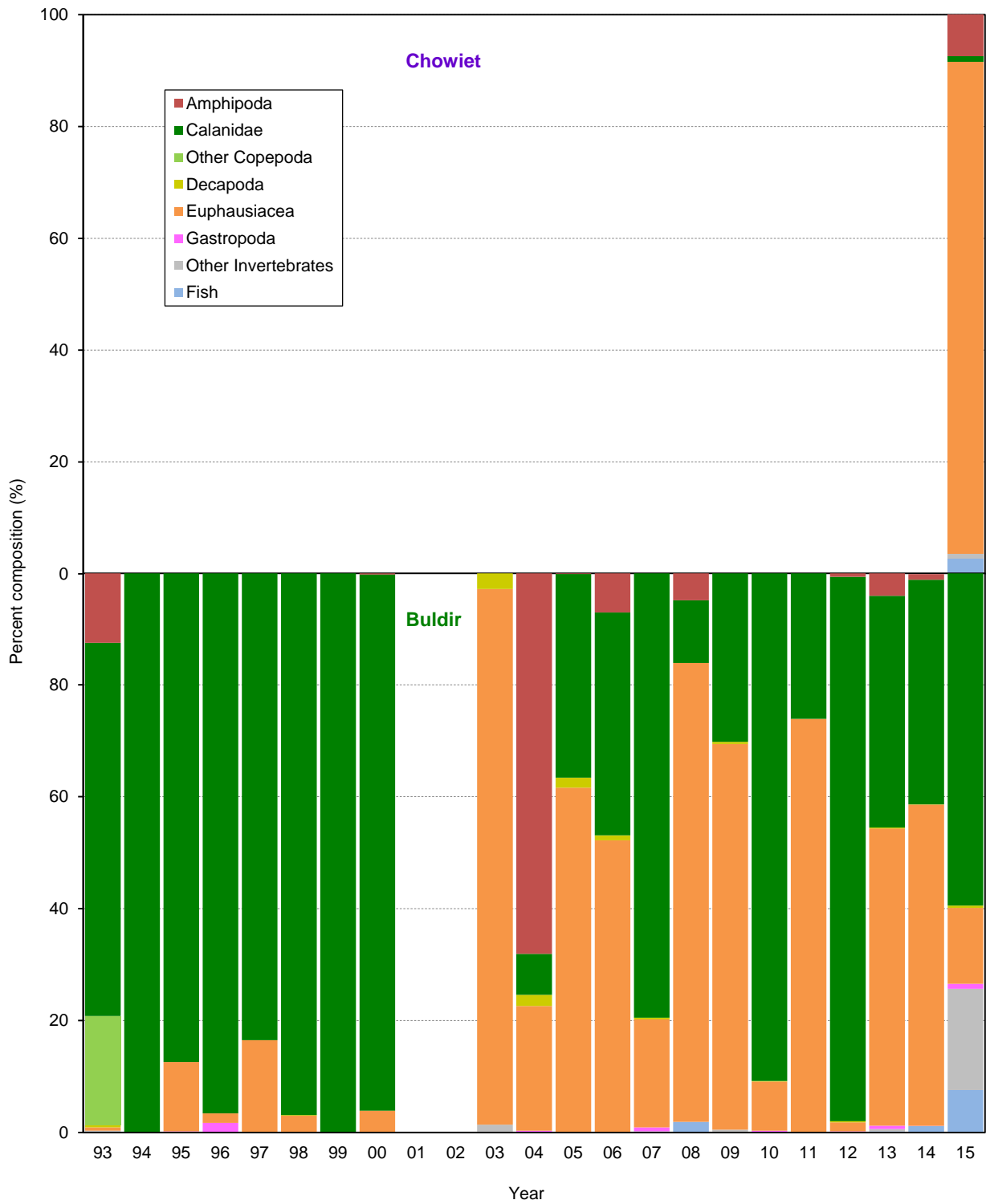


Figure 23. Percent composition of major prey items in diets of parakeet auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; purple = Alaska Peninsula, green = Aleutian Islands.

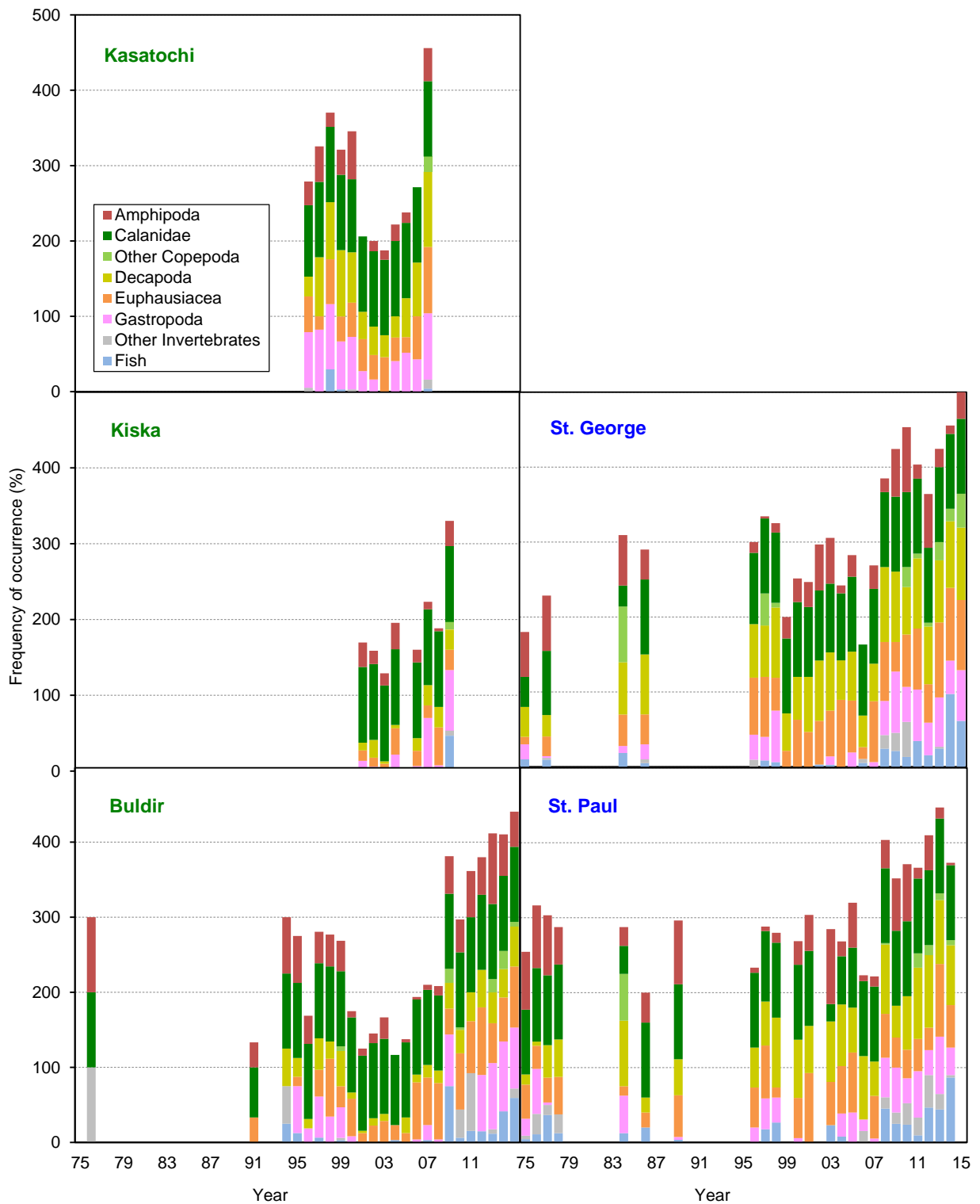


Figure 24. Frequency of occurrence of major prey items in diets of least auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea.

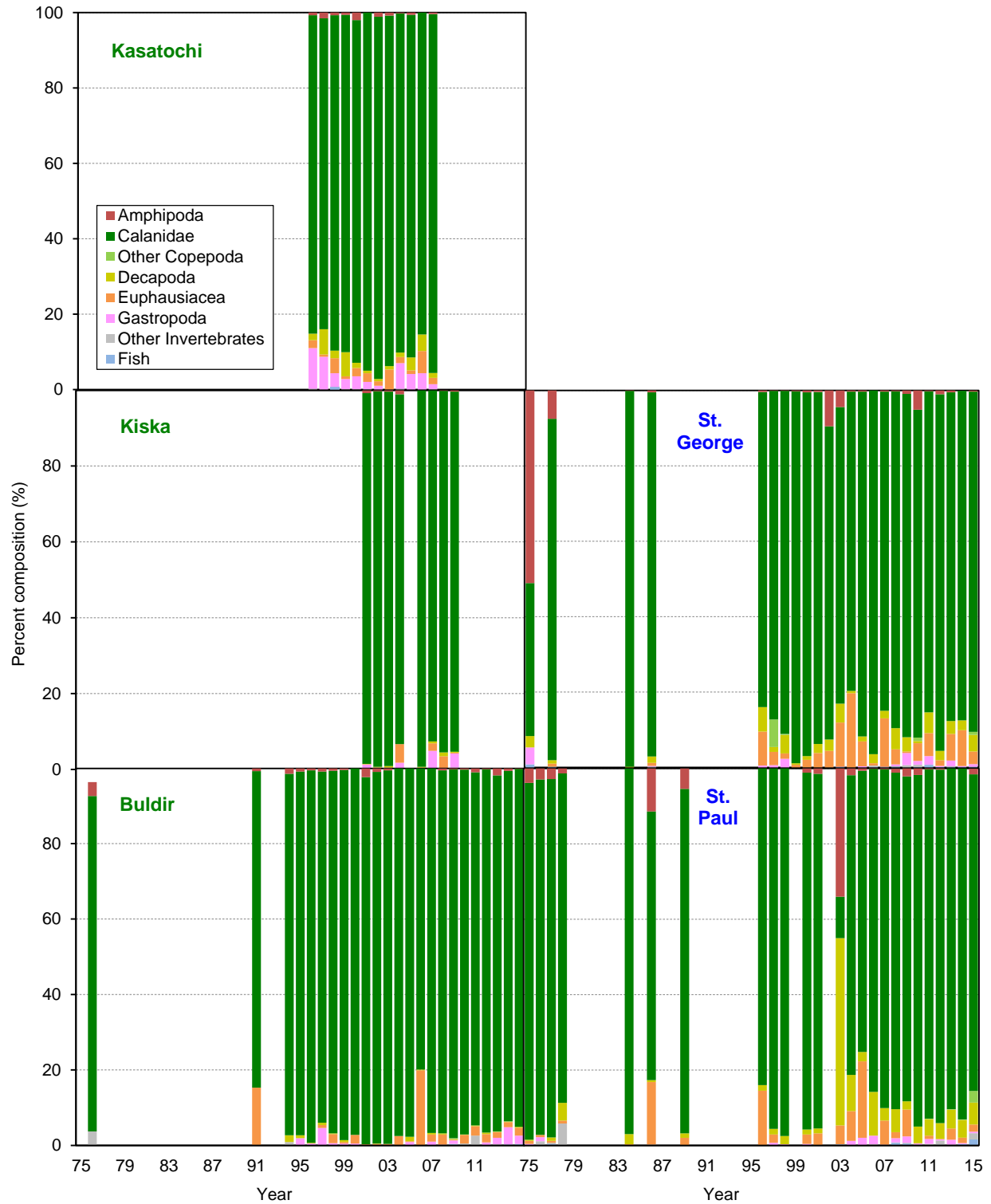


Figure 25. Percent composition of major prey items in diets of least auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea.

Table 92. Prey items found in diets of least auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Only sites

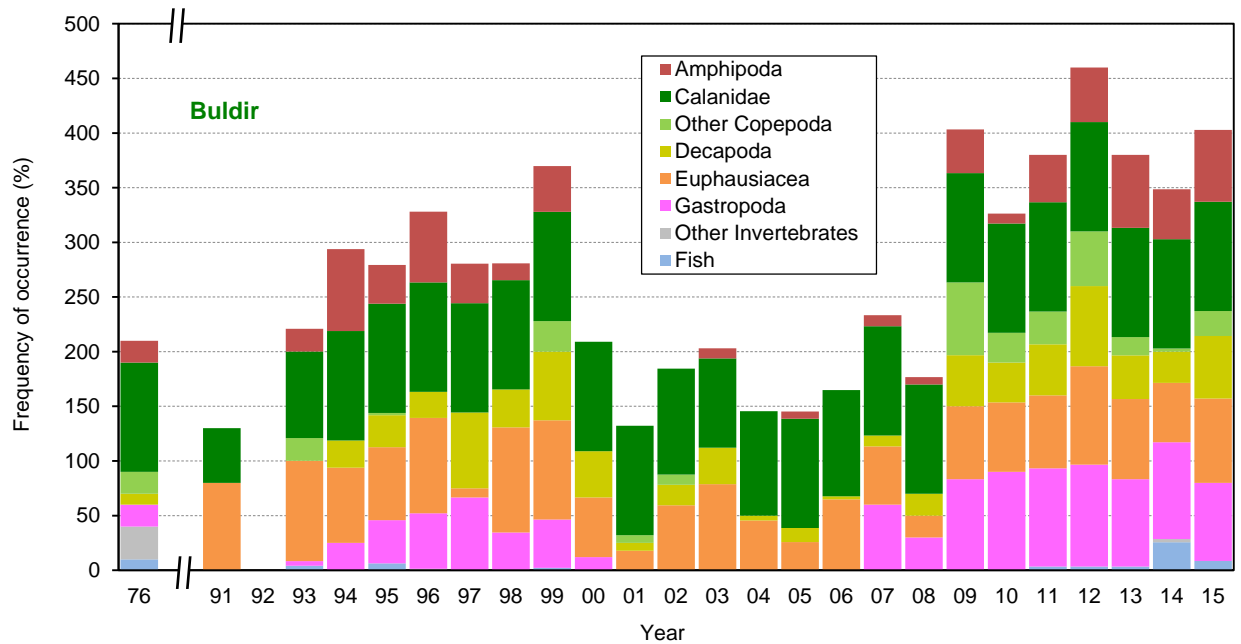


Figure 26. Frequency of occurrence of major prey items in diets of whiskered auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

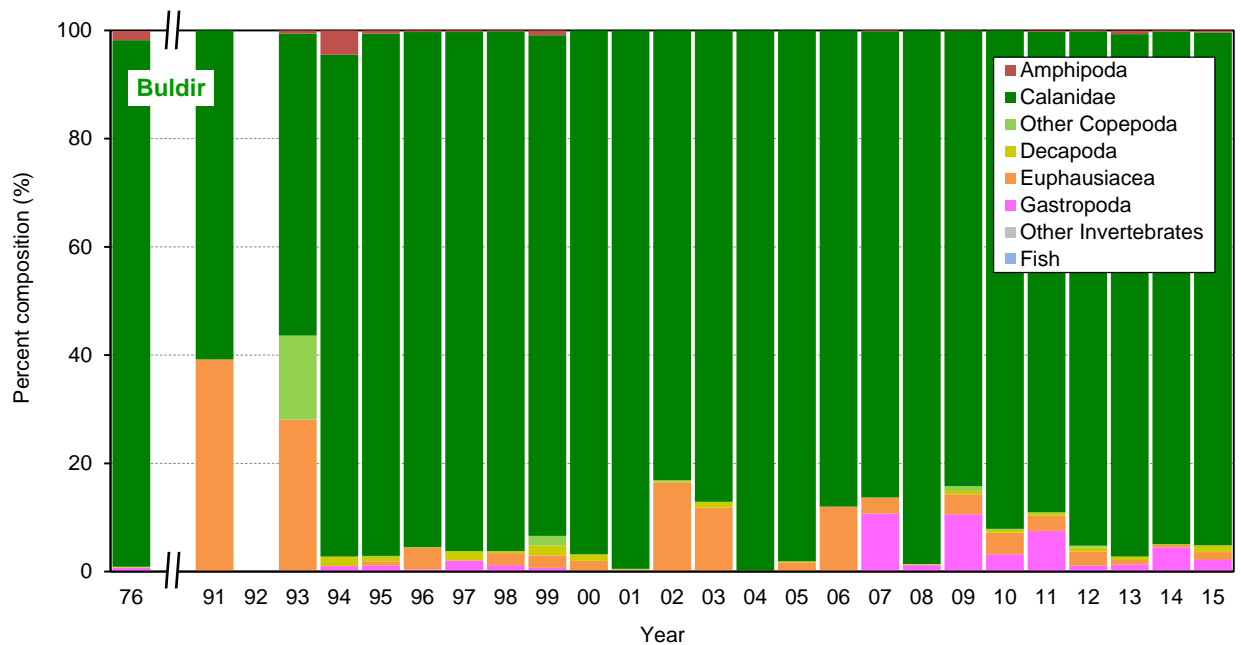


Figure 27. Percent composition of major prey items in diets of whiskered auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

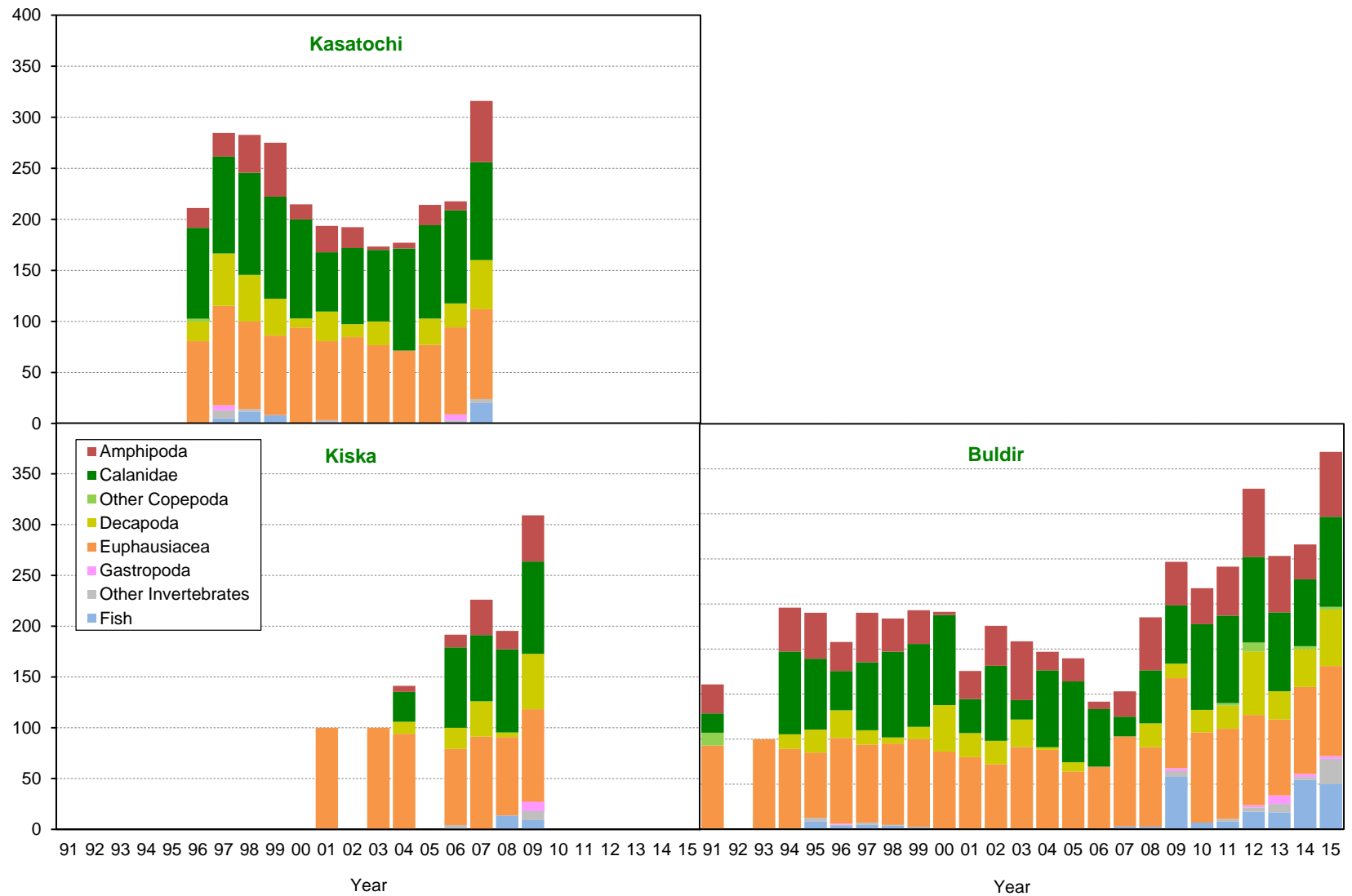


Figure 28. Frequency of occurrence of major prey items in diets of crested auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

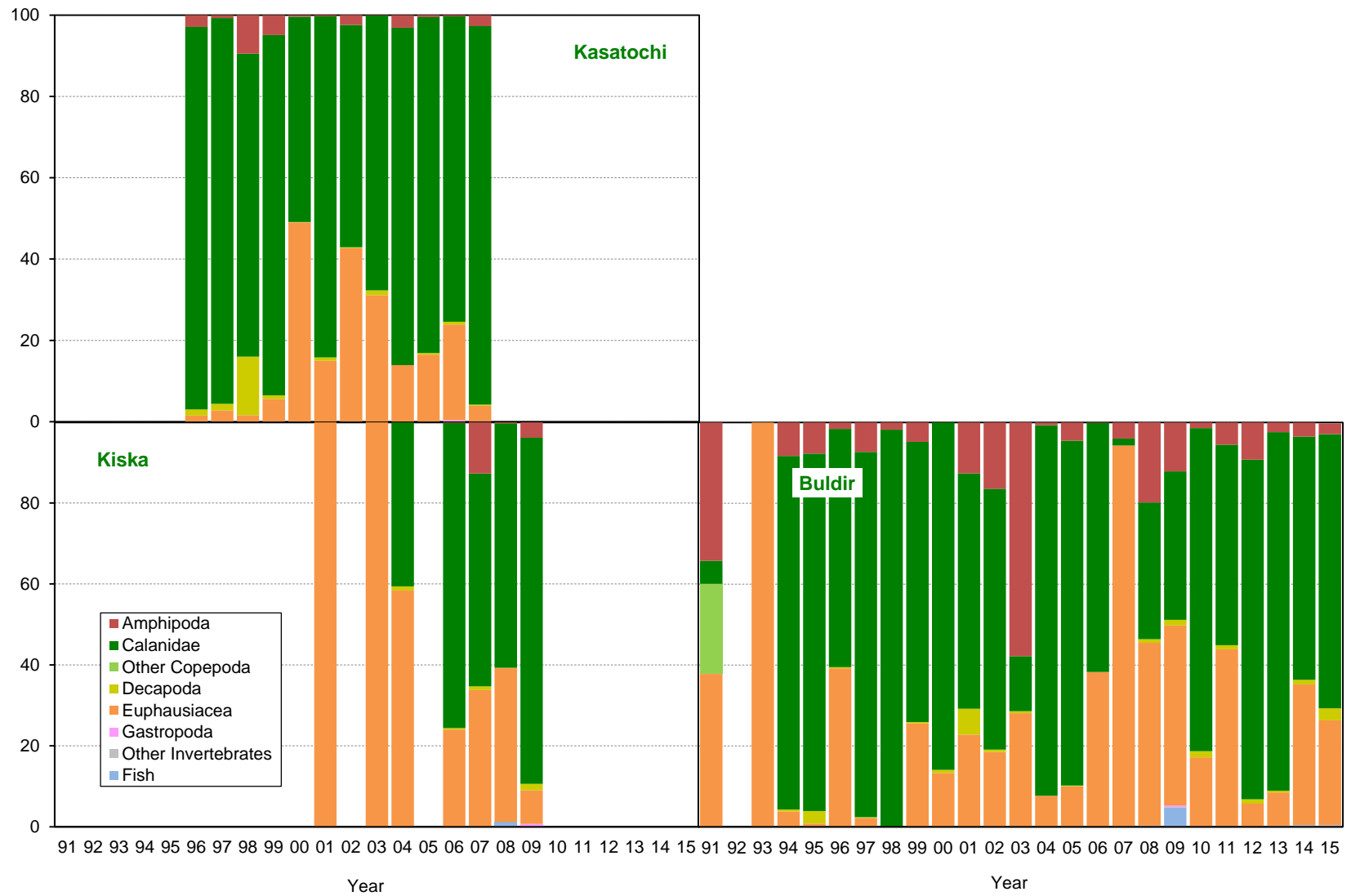


Figure 29. Percent composition of major prey items in diets of crested auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of regurgitations from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands.

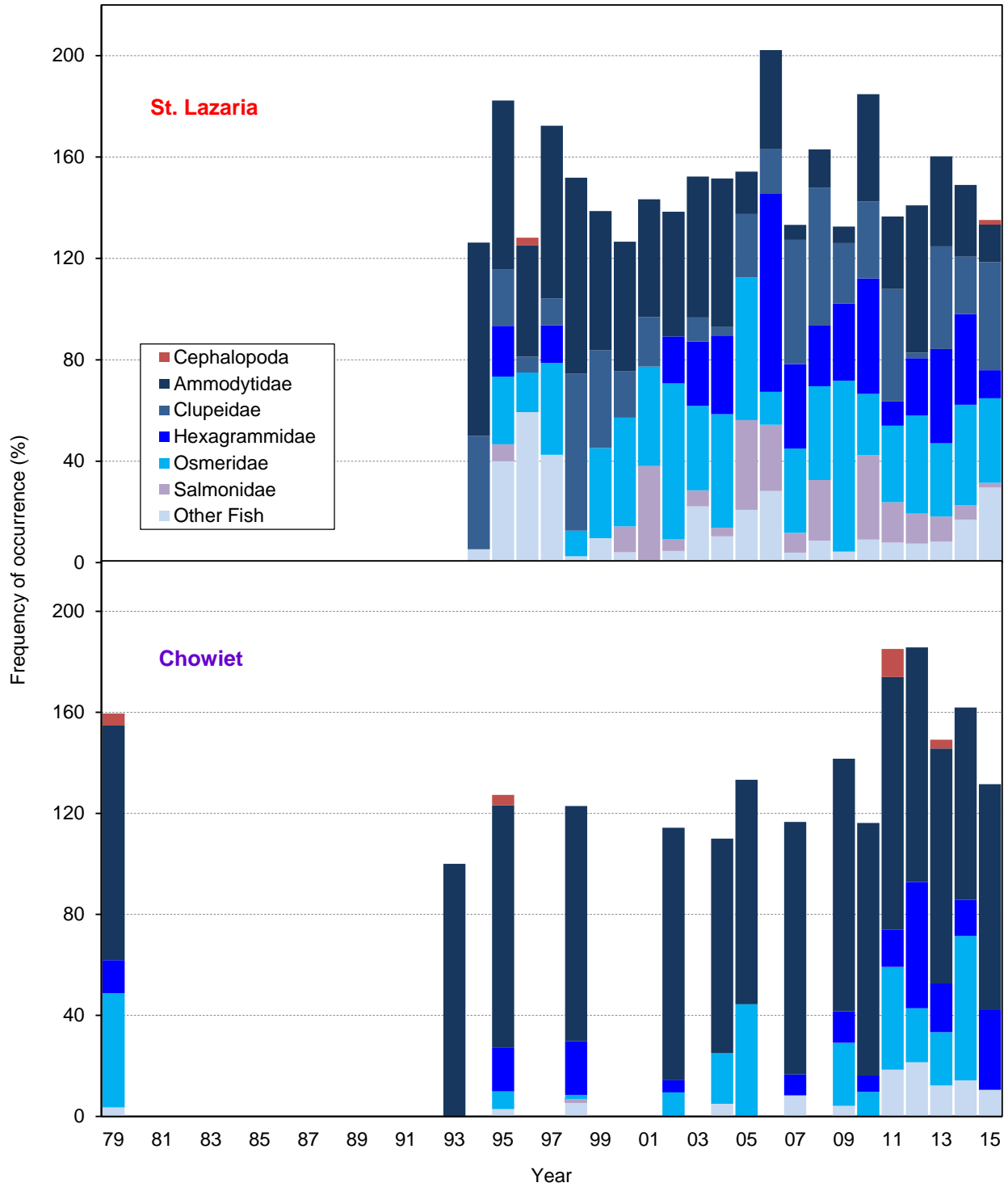


Figure 30. Frequency of occurrence of prey items in diets of rhinoceros auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula.

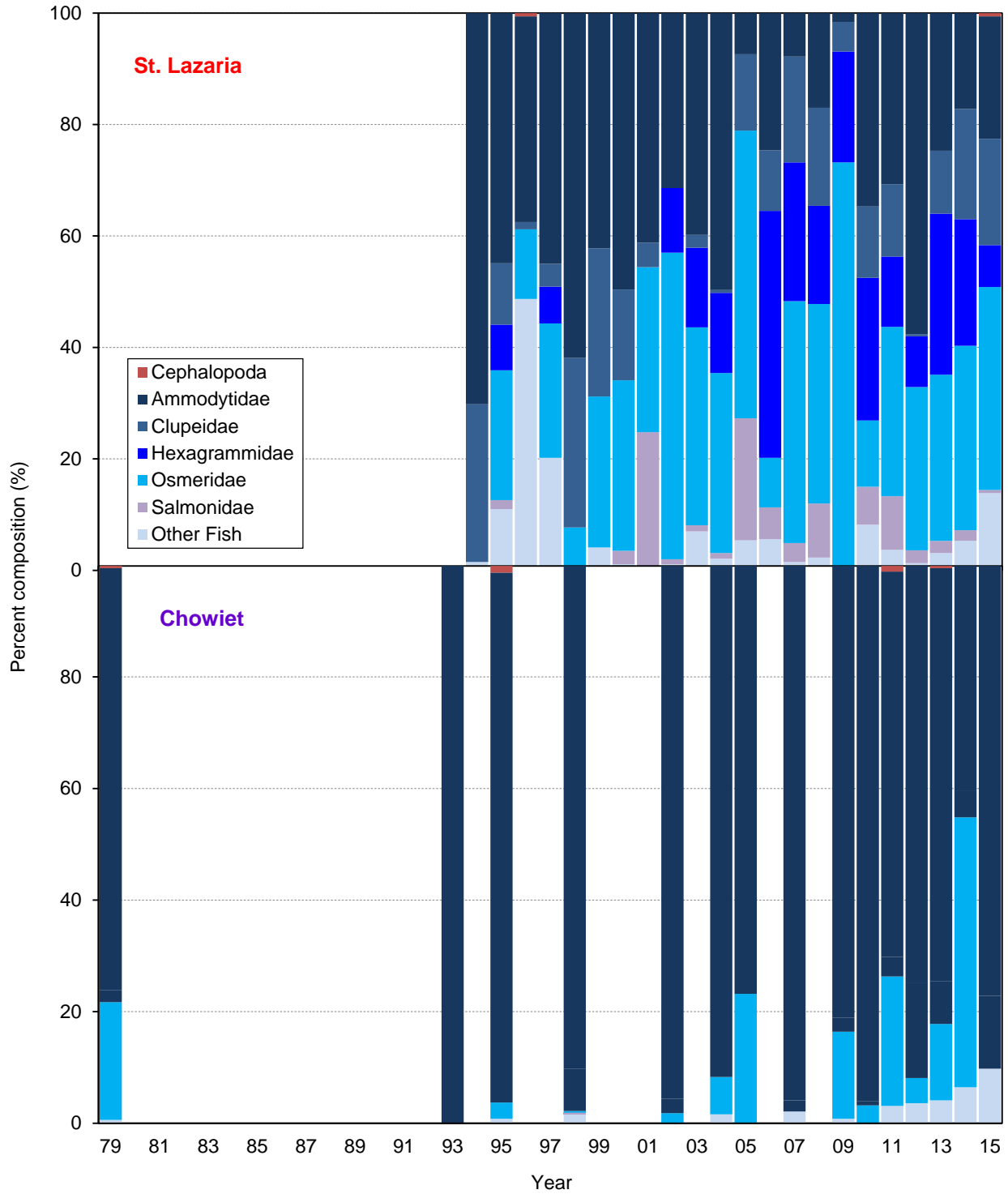


Figure 31. Percent composition of prey items in diets of rhinoceros auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula.

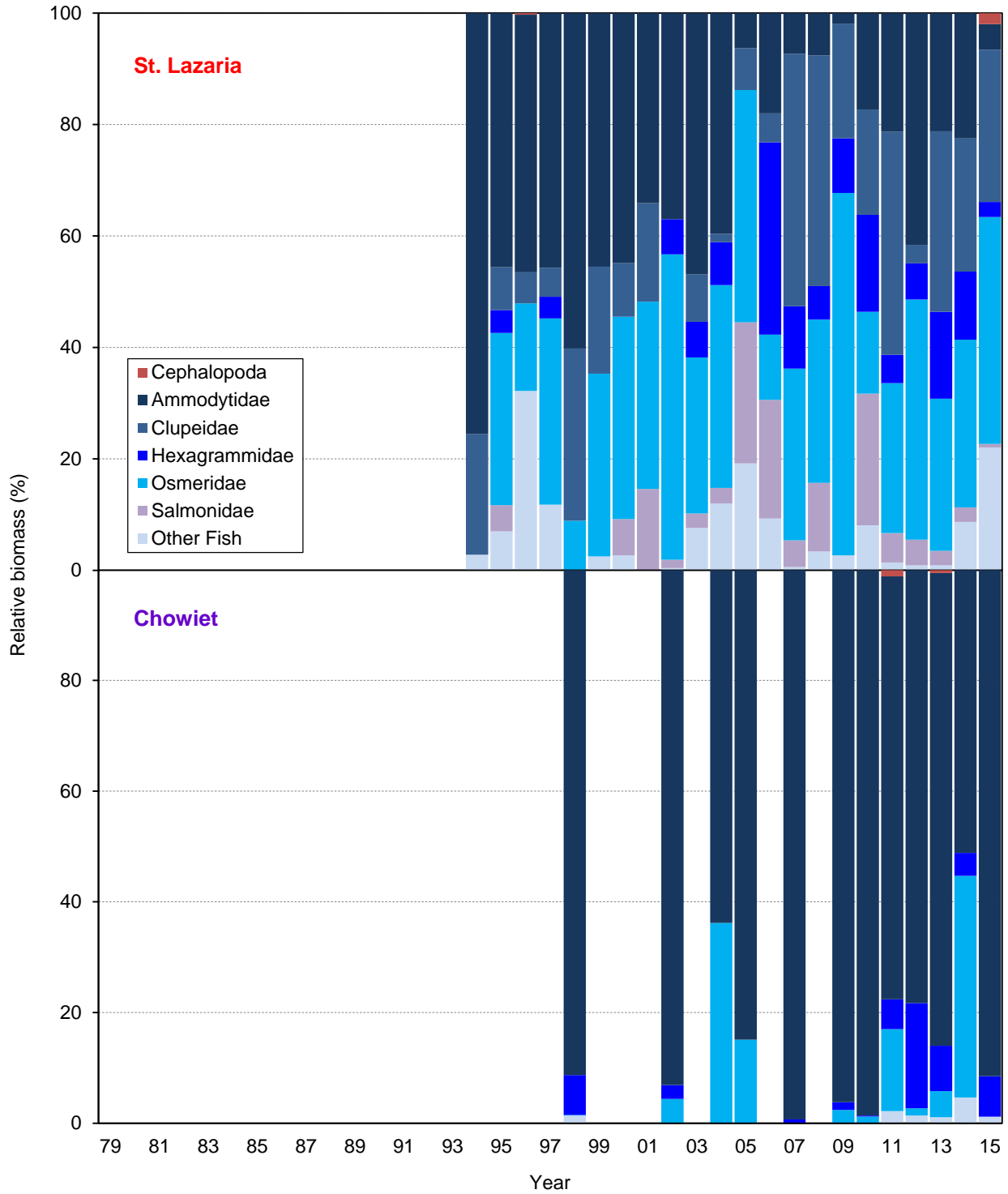


Figure 32. Relative biomass of prey items in diets of rhinoceros auklet chicks at sites within the Alaska Maritime National Wildlife Refuge. Numbers represent the percentage of the mass of combined food samples comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula.

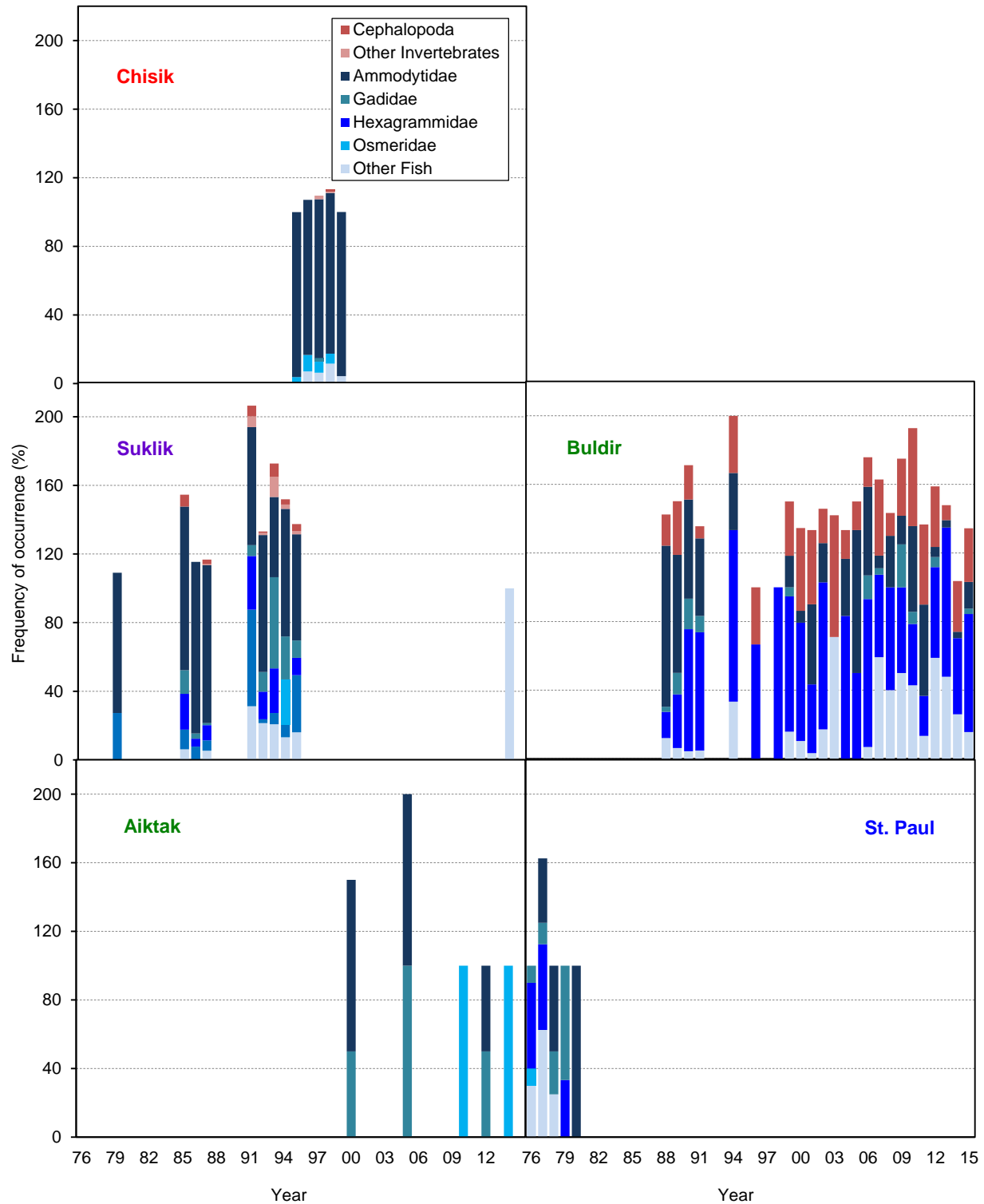


Figure 33. Frequency of occurrence of major prey items in diets of horned puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands, blue = Bering Sea.

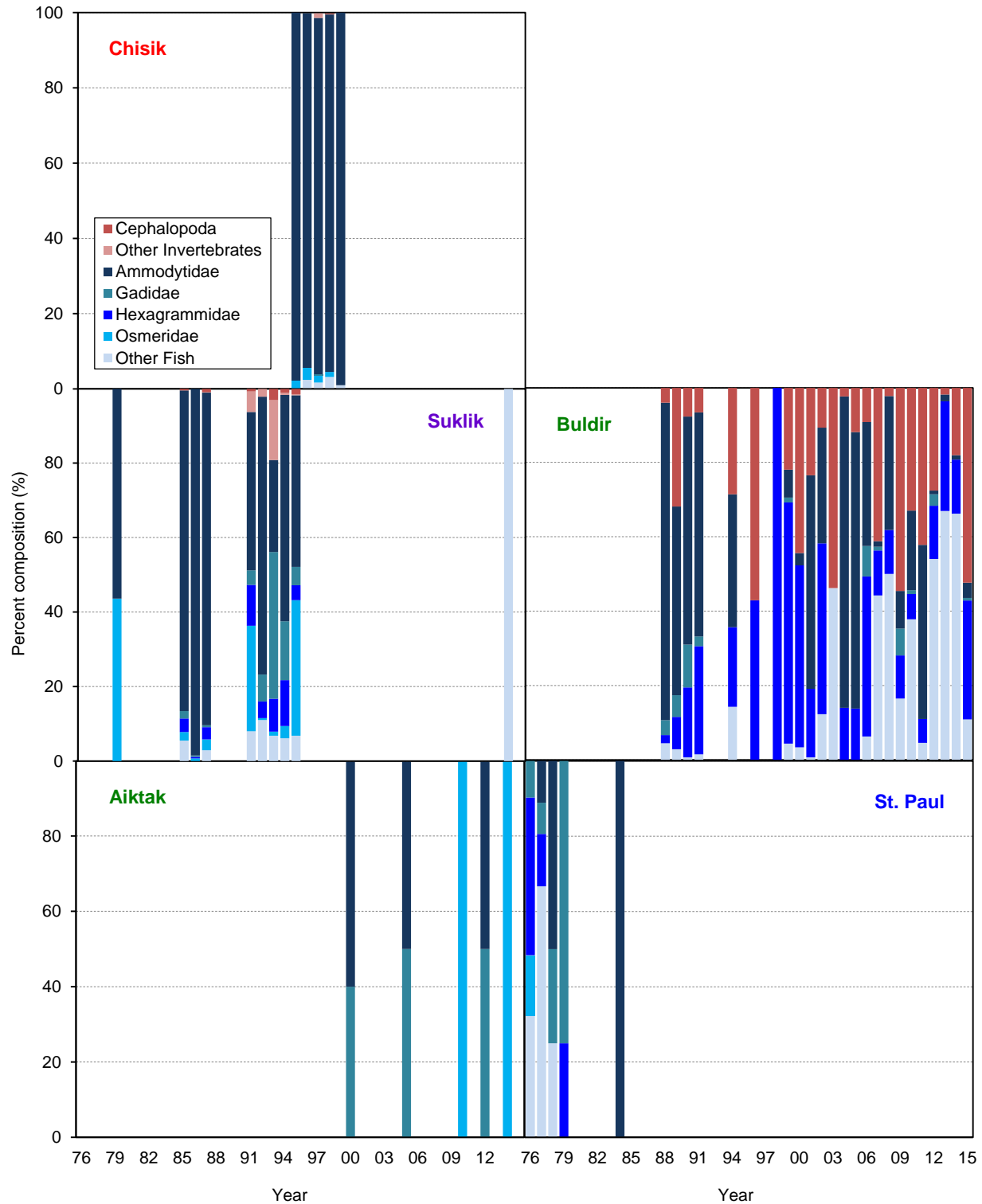


Figure 34. Percent composition of major prey items in diets of horned puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands, blue = Bering Sea.

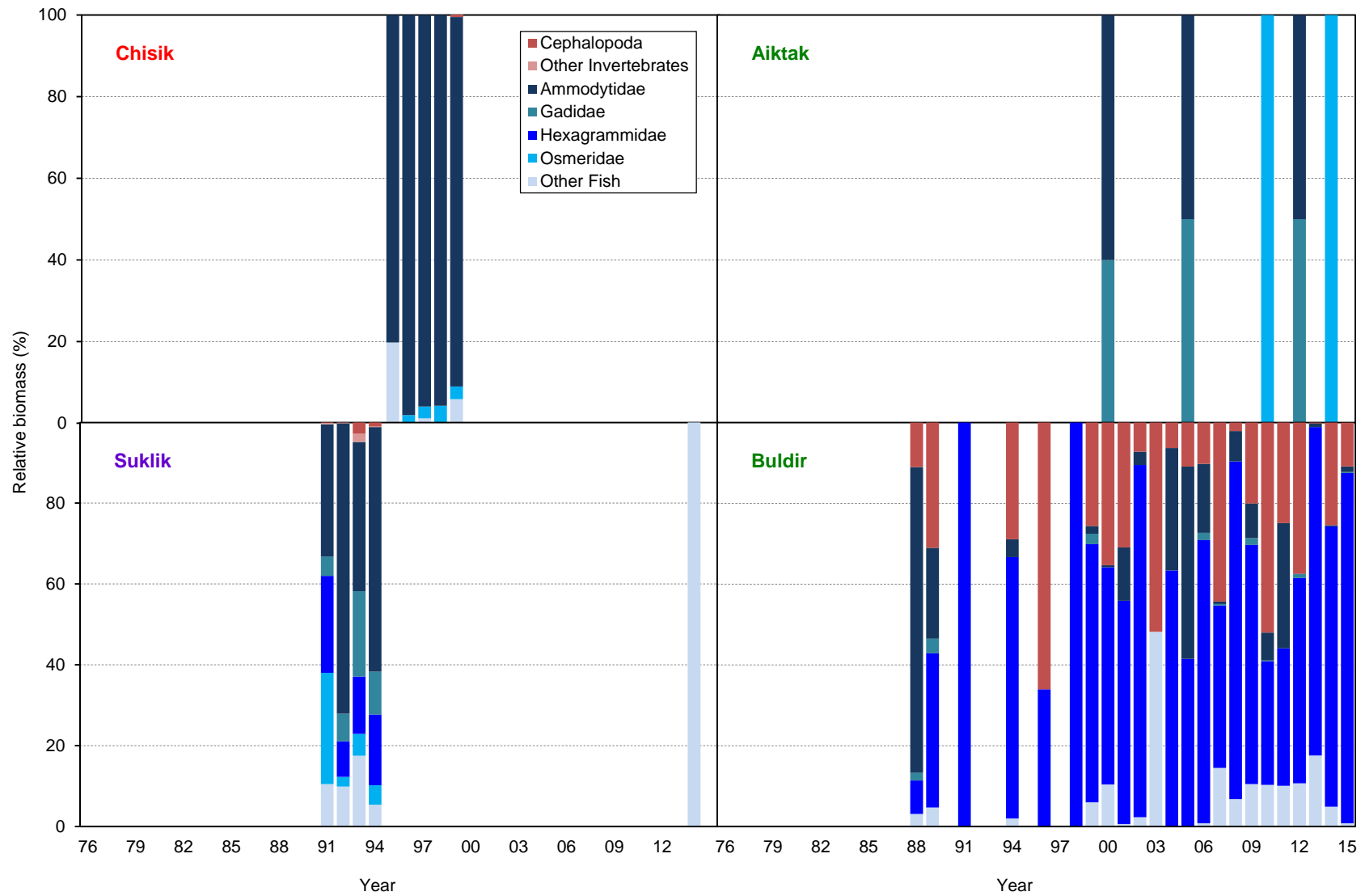


Figure 35. Relative biomass of major prey items in diets of horned puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Numbers represent the percentage of the mass of combined food samples comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

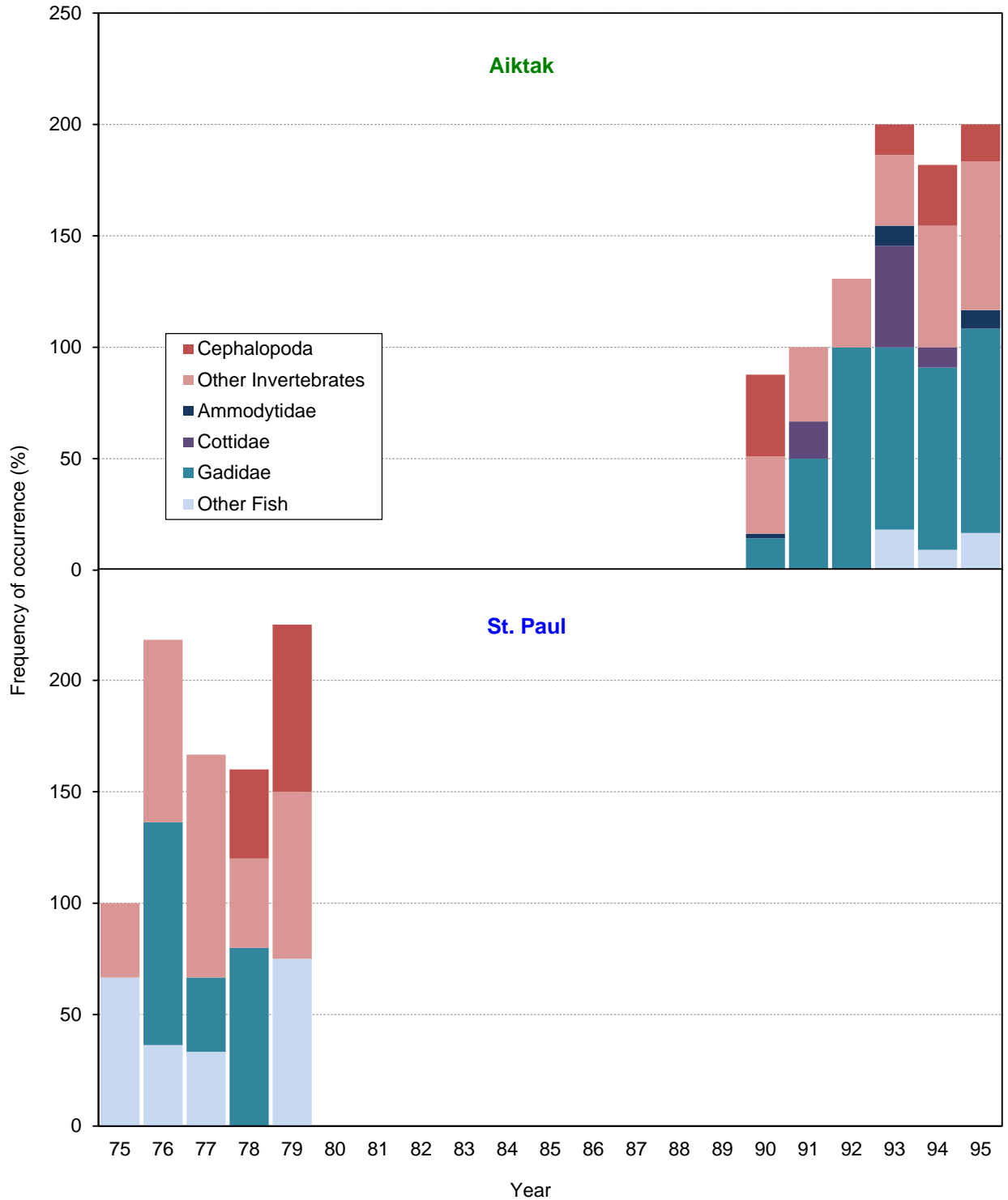


Figure 36. Frequency of occurrence of major prey items in diets of tufted puffin adults at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults collected at or near the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea.

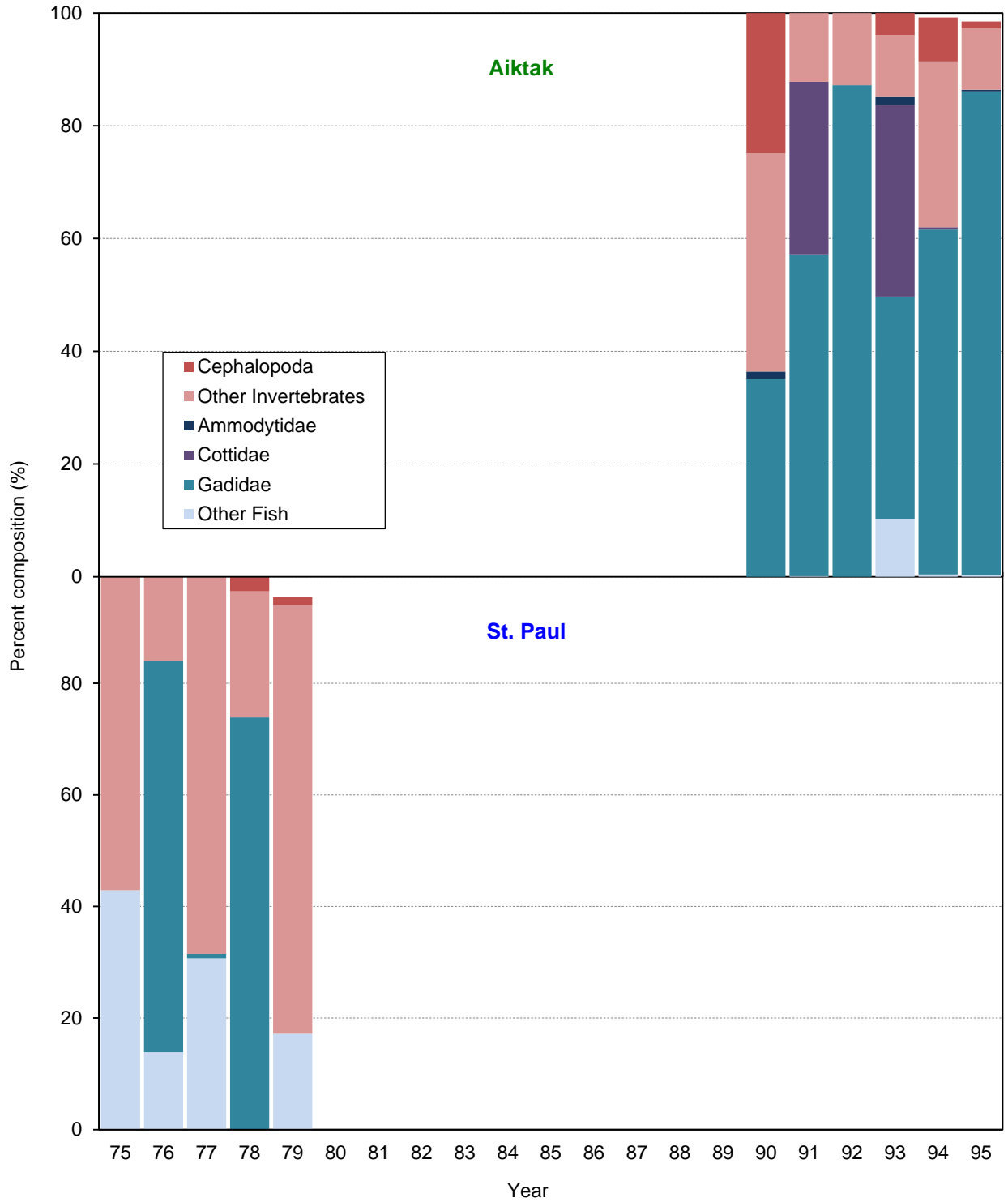


Figure 37. Percent composition of major prey items in diets of tufted puffin adults at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults collected at or near the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea.

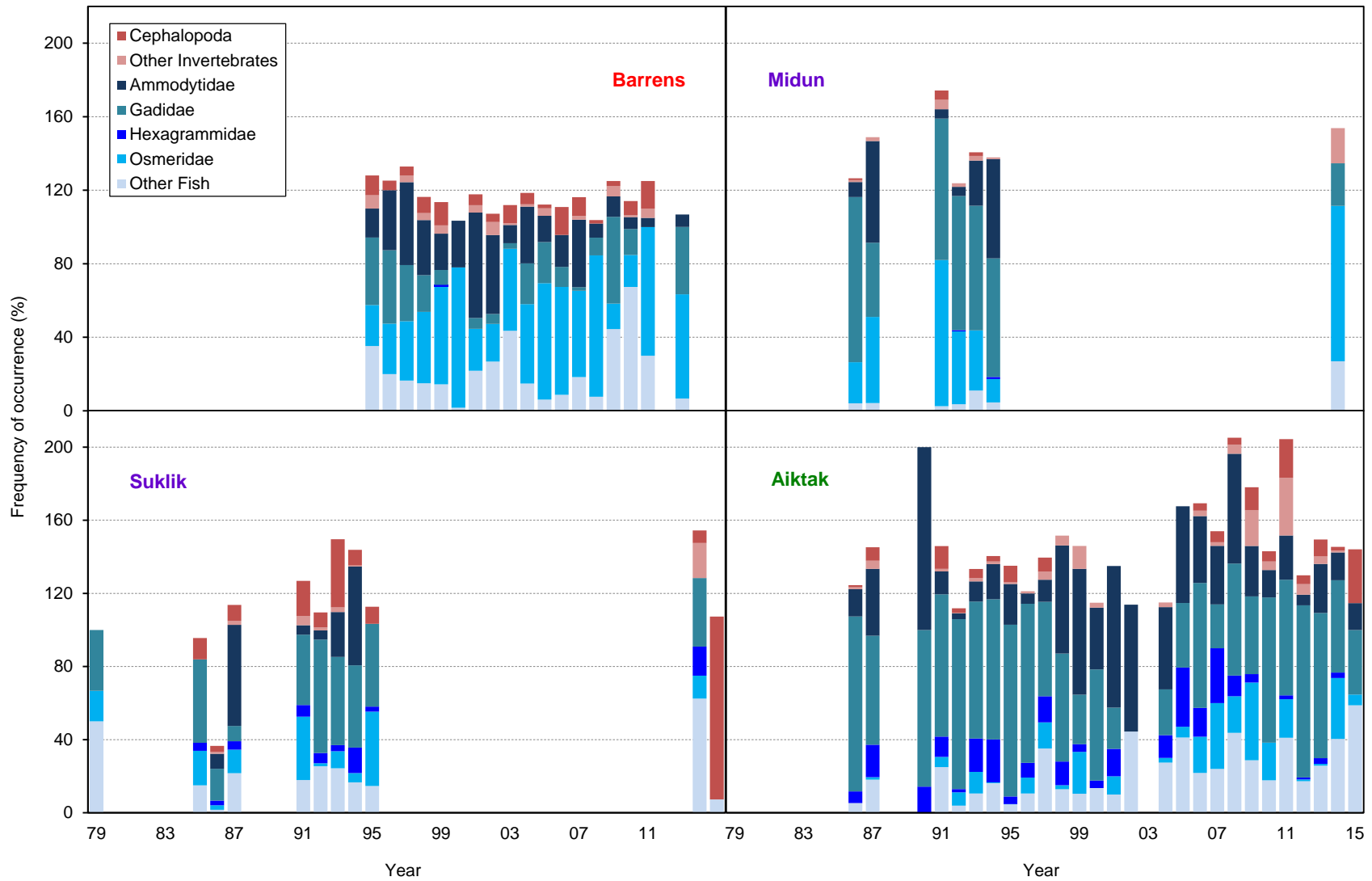


Figure 38. Frequency of occurrence of major prey items in diets of tufted puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of bill loads collected from adults returning to the colony to feed chicks, collections of bill loads dropped by adults at the colony and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

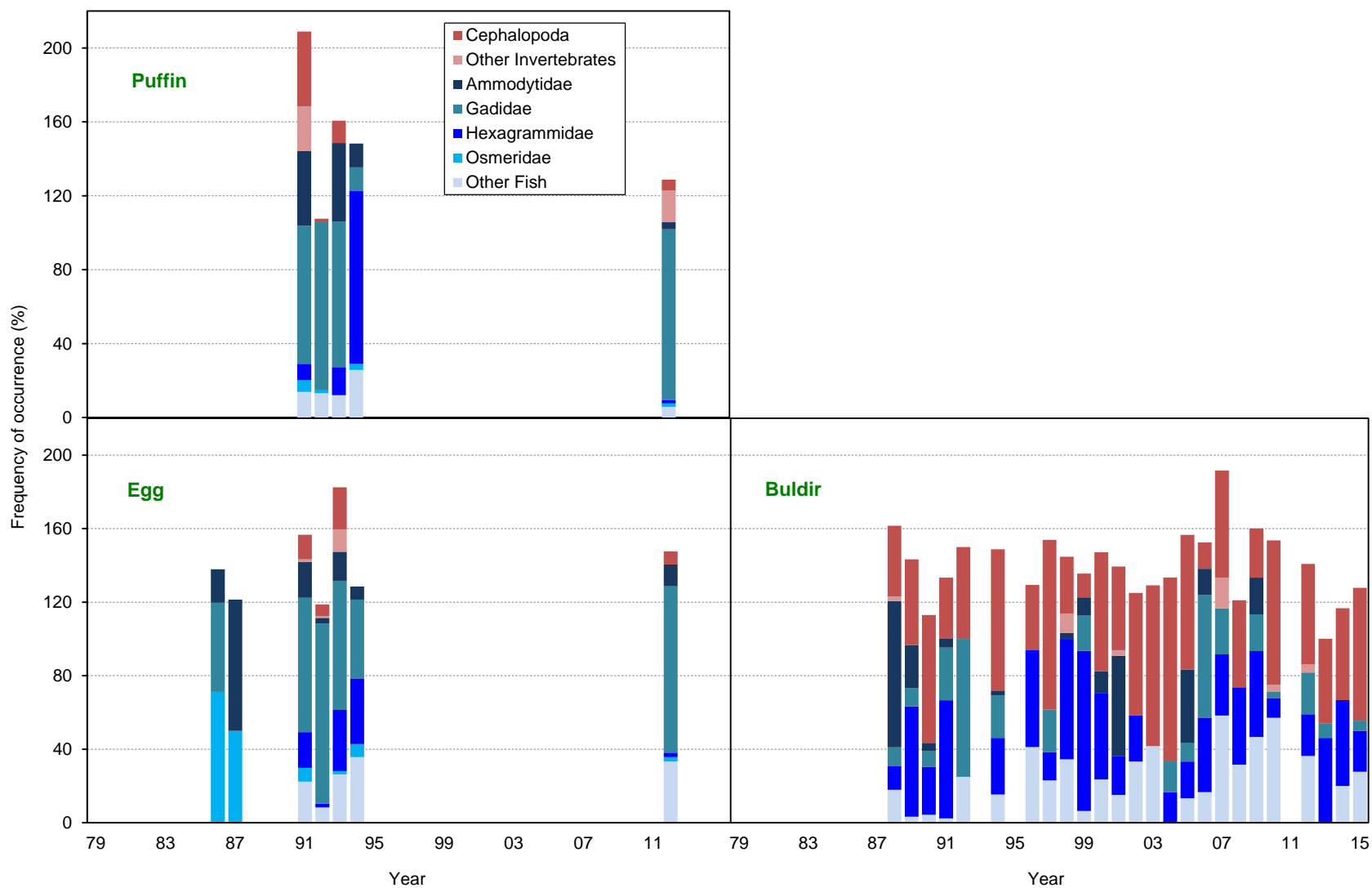


Figure 38 (continued). Frequency of occurrence of major prey items in diets of tufted puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of bill loads collected from adults returning to the colony to feed chicks, collections of bill loads dropped by adults at the colony and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

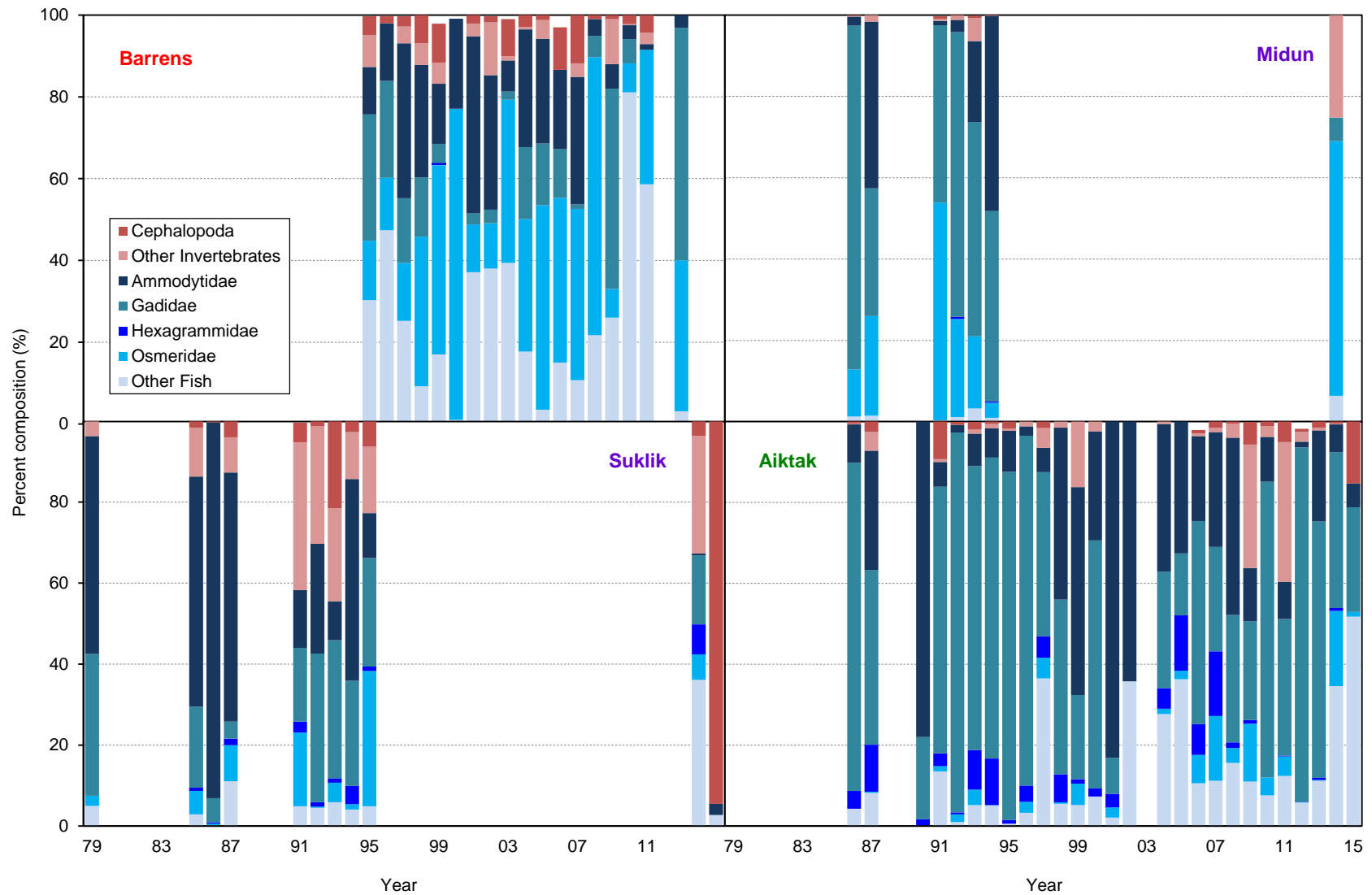


Figure 39. Percent composition of major prey items in diets of tufted puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

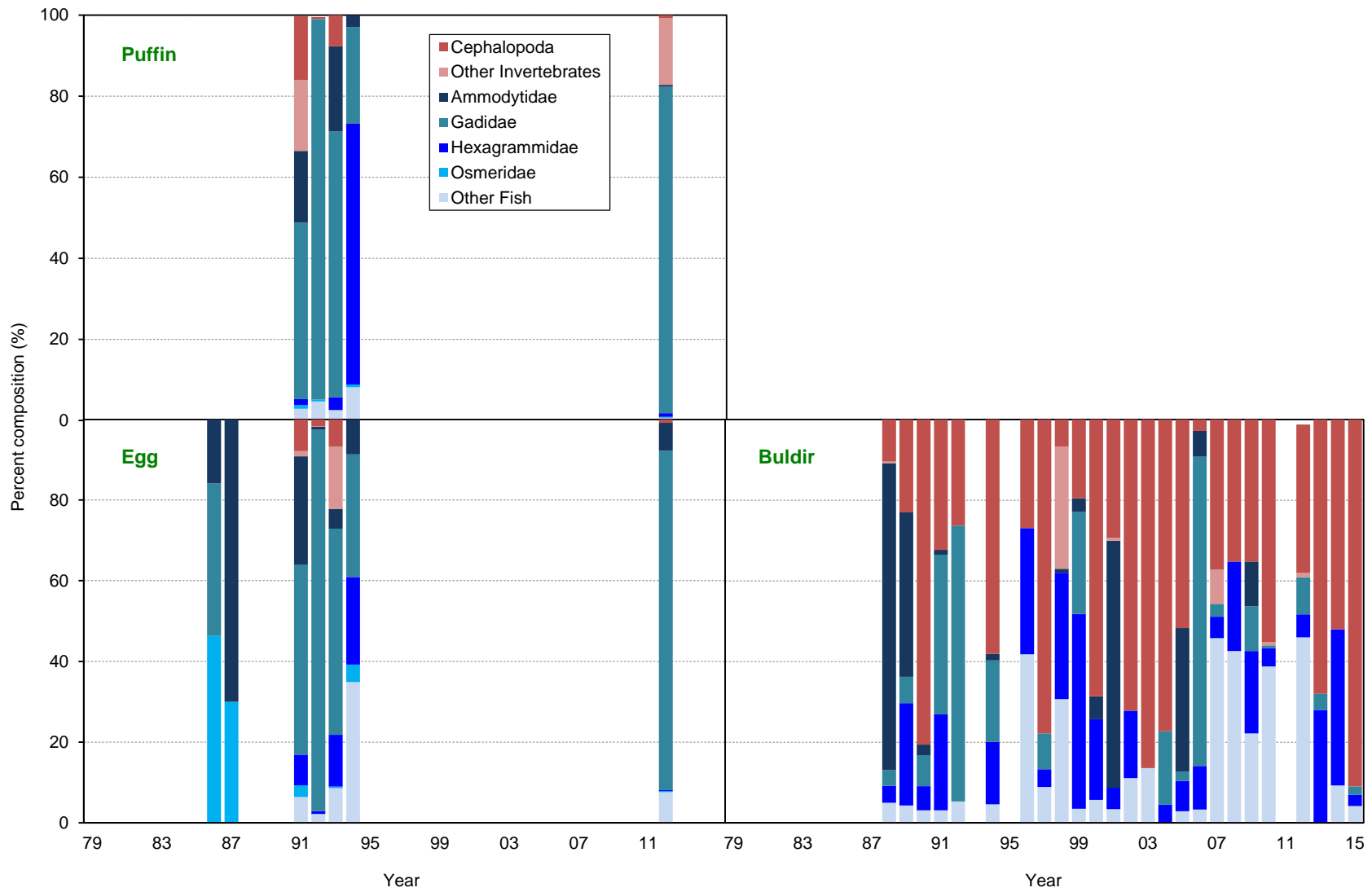


Figure 39 (continued). Percent composition of major prey items in diets of tufted puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

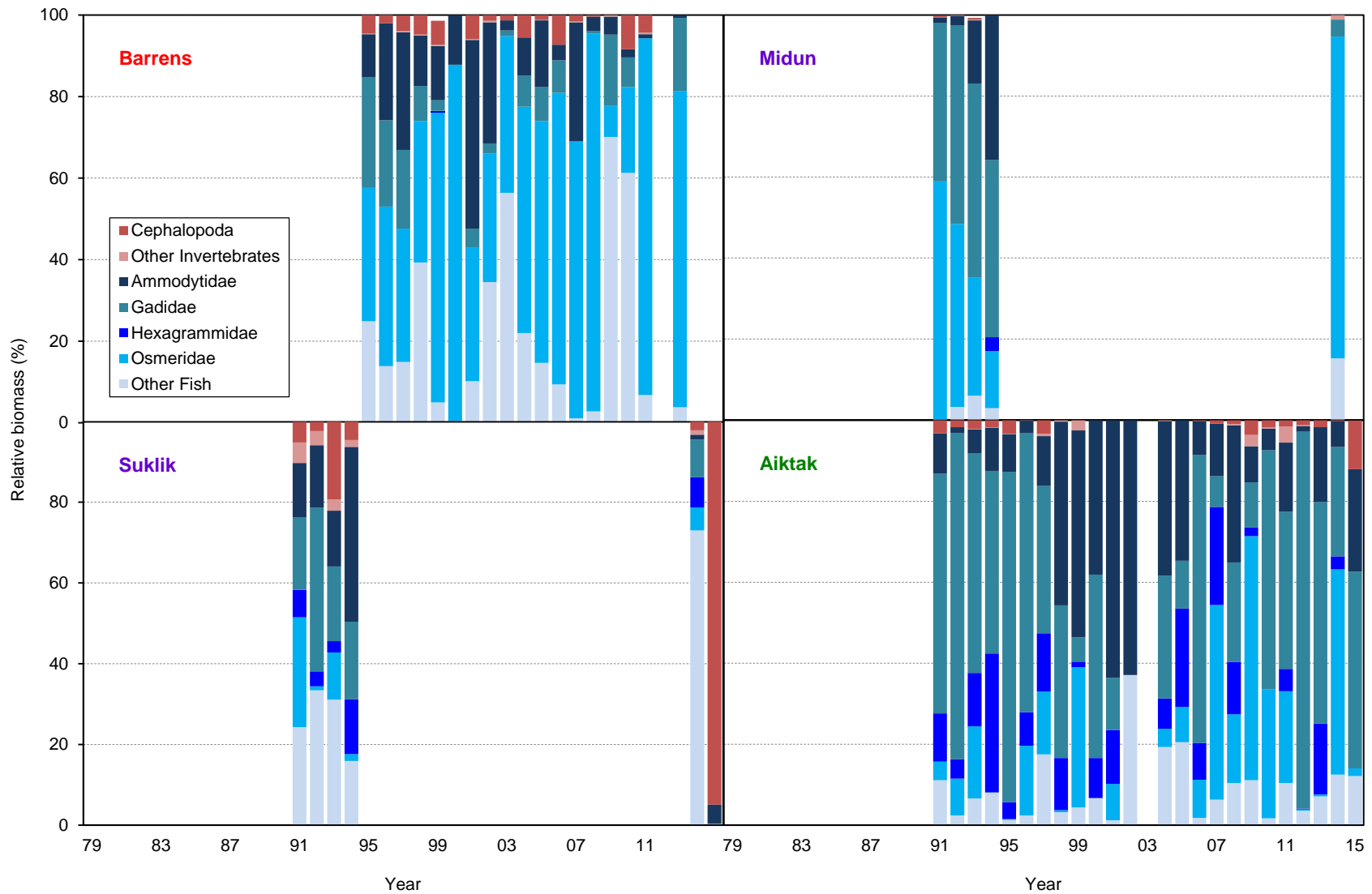


Figure 40. Relative biomass of major prey items in diets of tufted puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Numbers represent the percentage of the mass of combined food samples comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

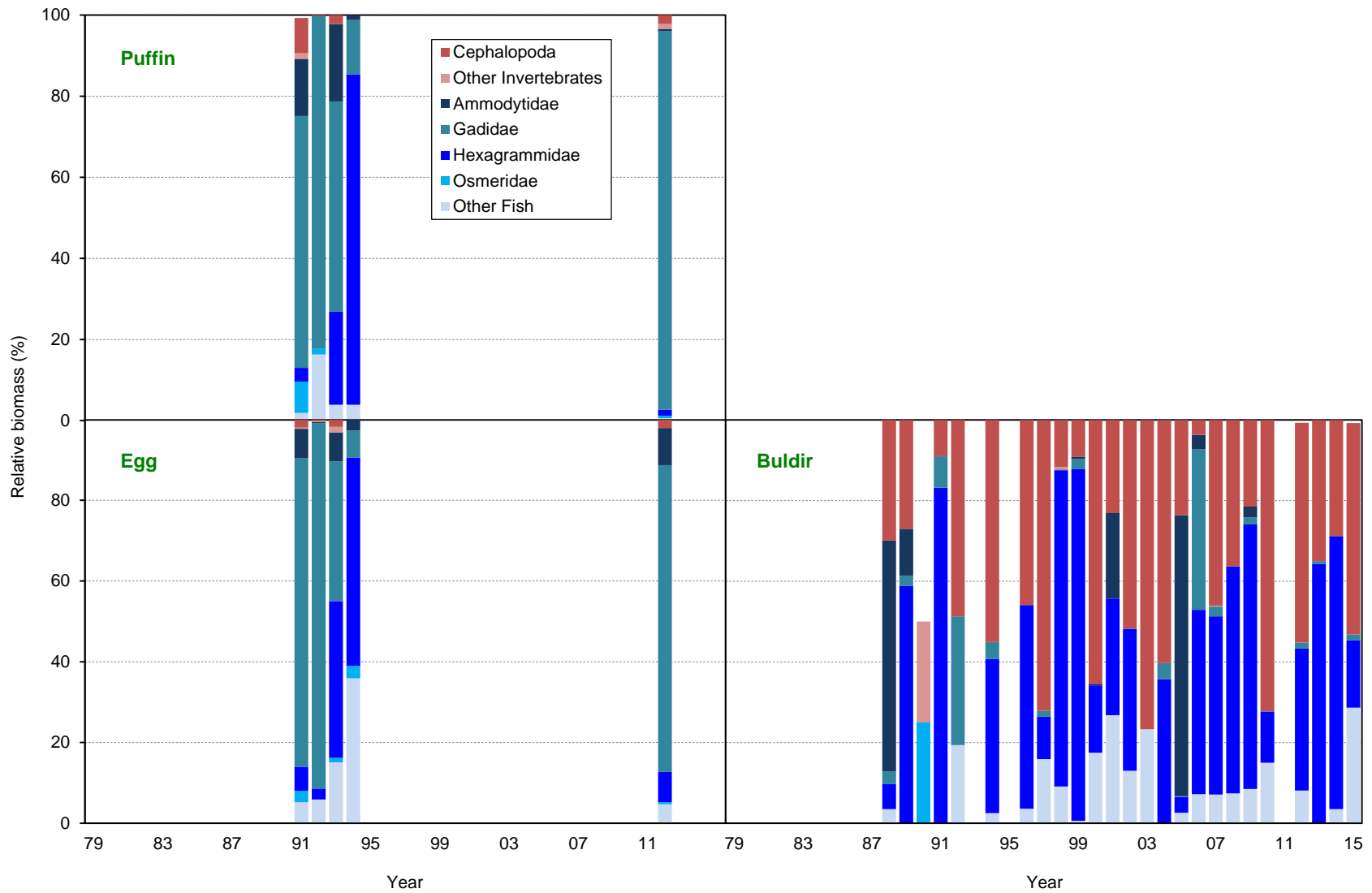


Figure 40 (continued). Relative biomass of major prey items in diets of tufted puffin chicks at sites within the Alaska Maritime National Wildlife Refuge. Numbers represent the percentage of the mass of combined food samples comprised by each prey item. Samples consist of bill loads collected from adults returning to the colony to feed chicks; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

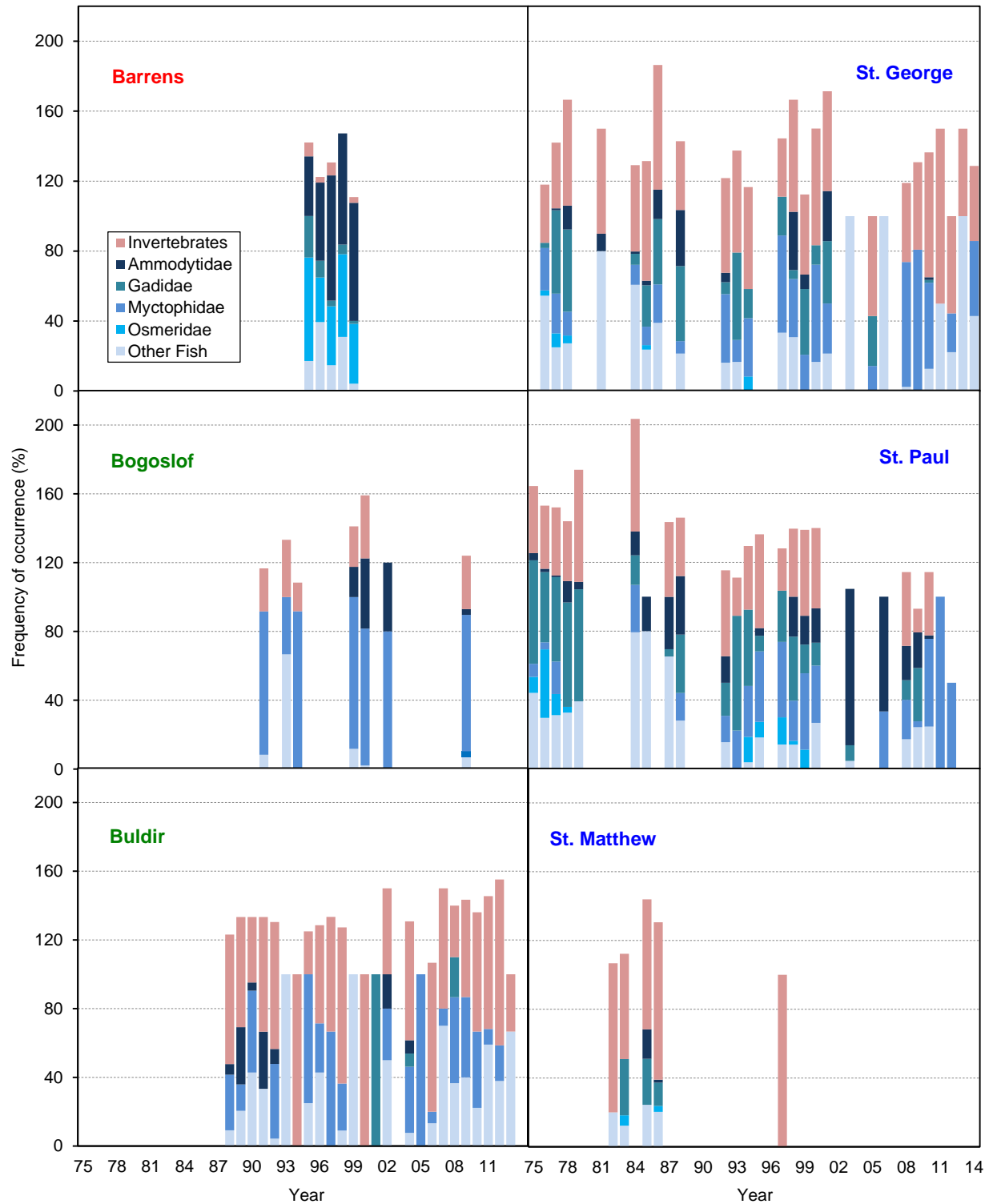


Figure 41. Frequency of occurrence of major prey items in diets of black-legged kittiwakes at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults and chicks collected or lavaged at or near the colony and regurgitations from adults returning to the colony to feed chicks or from chicks themselves; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

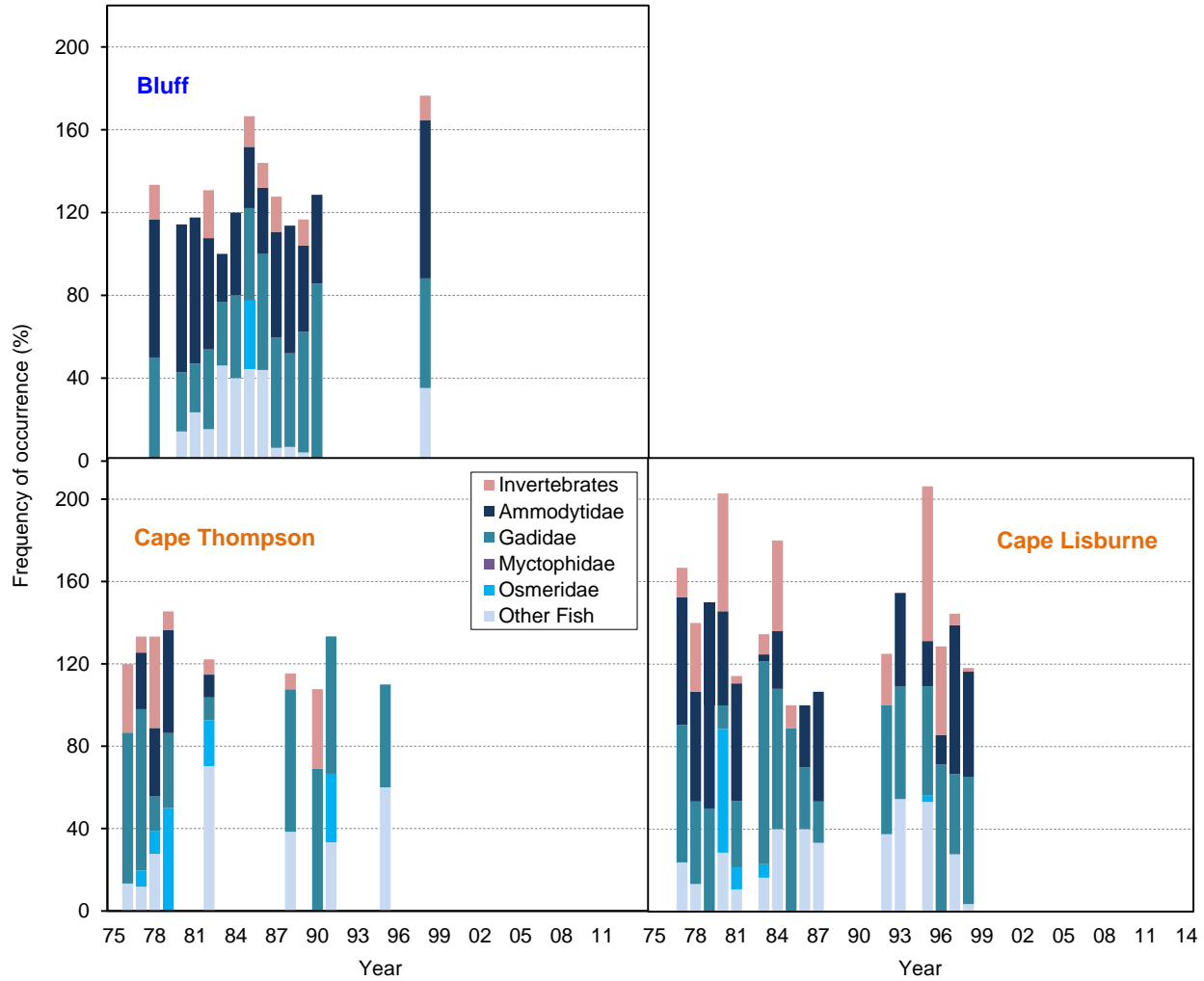


Figure 41 (continued). Frequency of occurrence of major prey items in diets of black-legged kittiwakes at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults and chicks collected or lavaged at or near the colony and regurgitations from adults returning to the colony to feed chicks or from chicks themselves; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

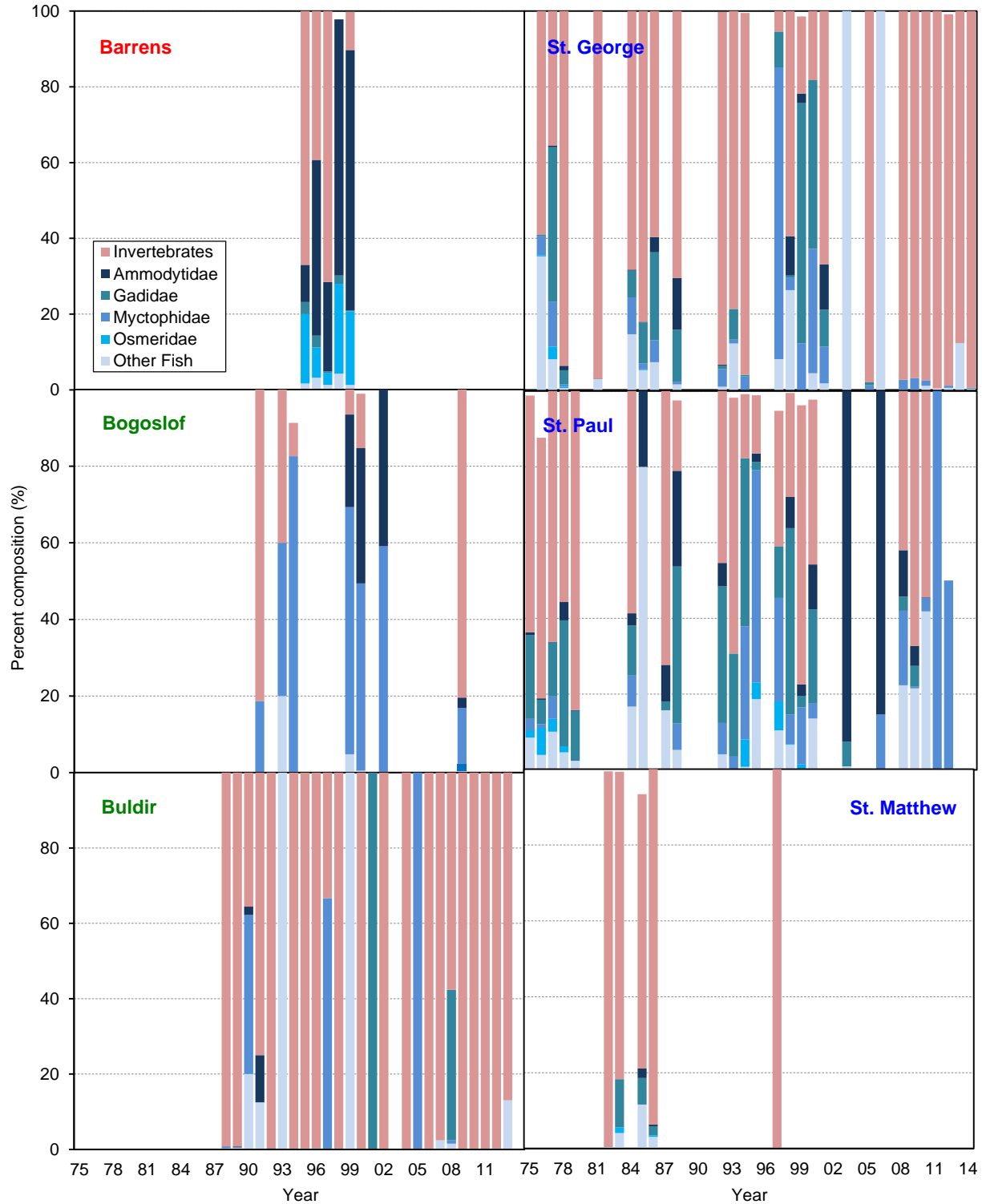


Figure 42. Percent composition of major prey items in diets of black-legged kittiwakes at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults and chicks collected or lavaged at or near the colony and regurgitations from adults returning to the colony to feed chicks or from chicks themselves; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

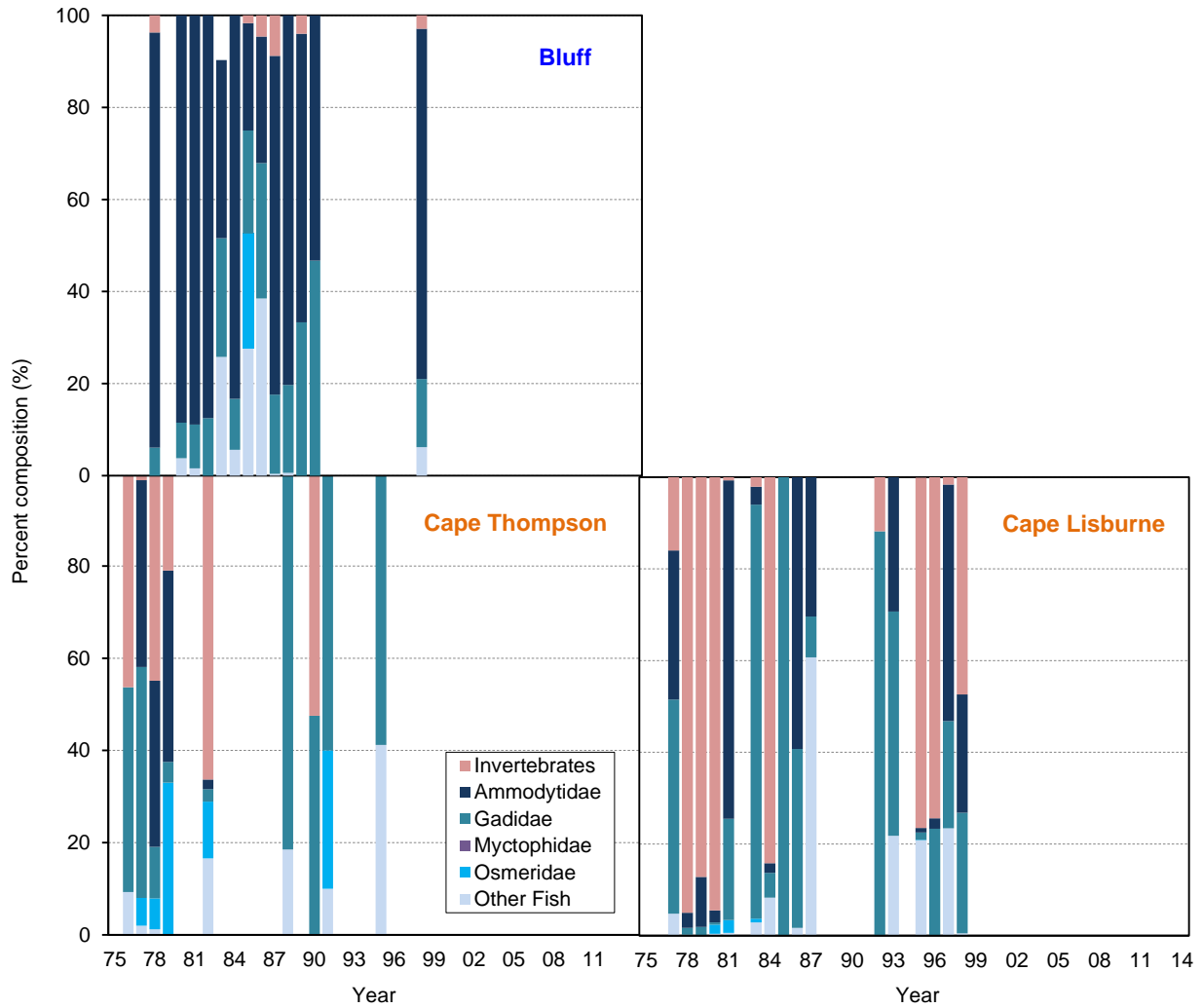


Figure 42 (continued). Percent composition of major prey items in diets of black-legged kittiwakes at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults and chicks collected or lavaged at or near the colony and regurgitations from adults returning to the colony to feed chicks or from chicks themselves; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands, blue = Bering Sea, orange = Chukchi Sea.

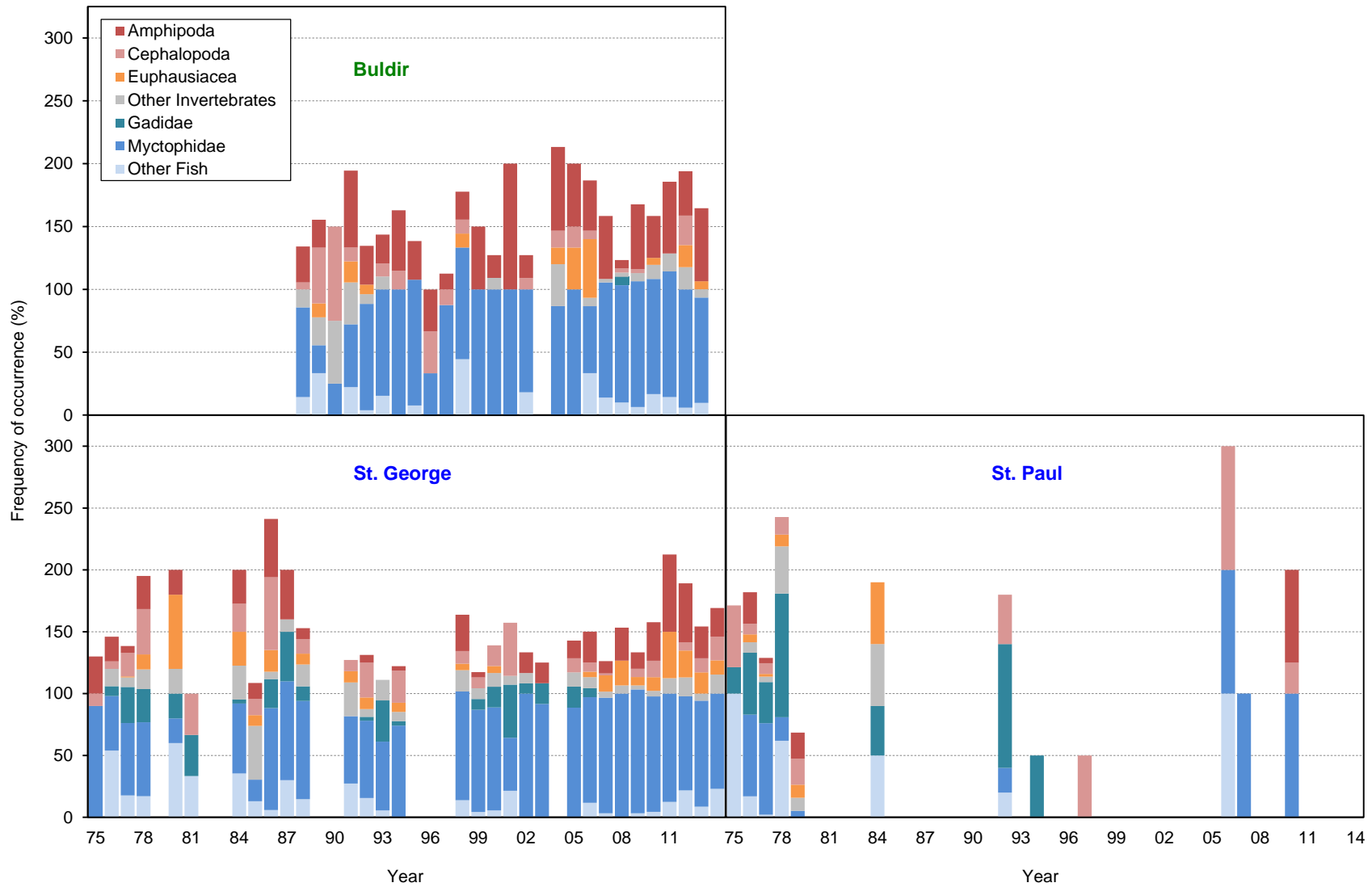


Figure 43. Frequency of occurrence of major prey items in diets of red-legged kittiwakes at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults and chicks collected at or near the colony and regurgitations from adults returning to the colony to feed chicks or from chicks themselves; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea.

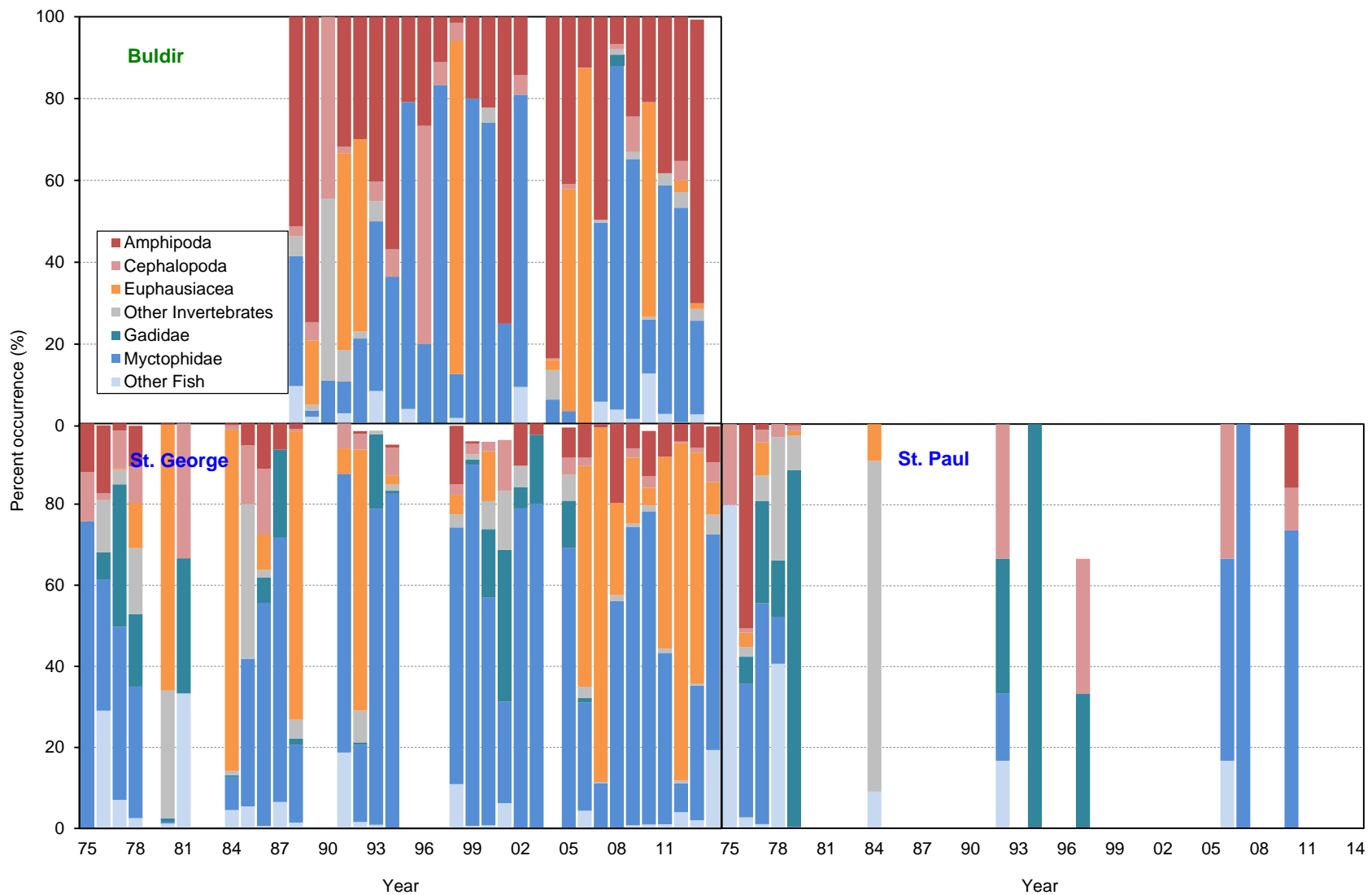


Figure 44. Percent composition of major prey items in diets of red-legged kittiwakes at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults and chicks collected at or near the colony and regurgitations from adults returning to the colony to feed chicks or from chicks themselves; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; green = Aleutian Islands, blue = Bering Sea.

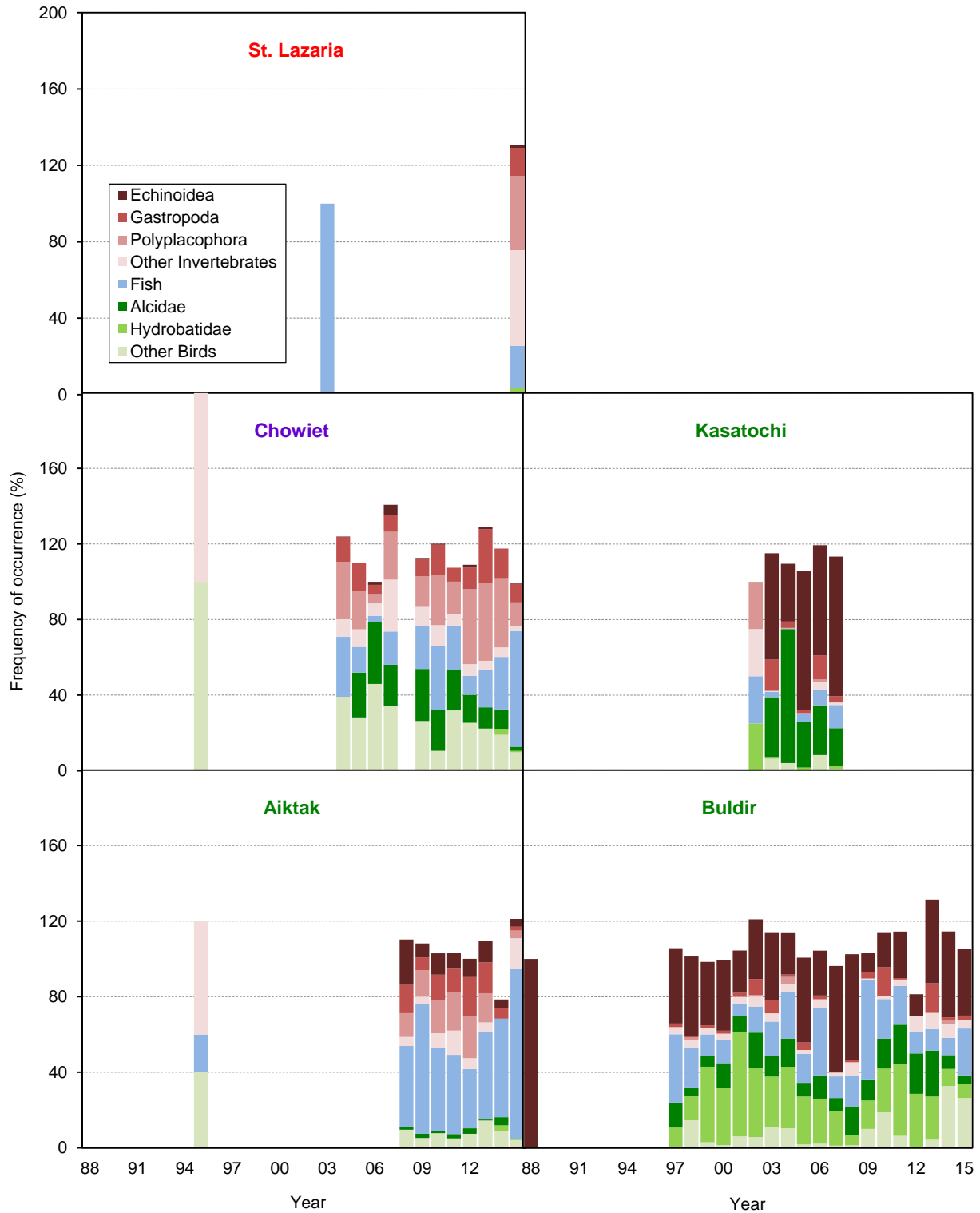


Figure 45. Frequency of occurrence of major prey items in diets of glaucous-winged gull adults at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of stomach contents from adults collected at or near the colony and pellets regurgitated by adults at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

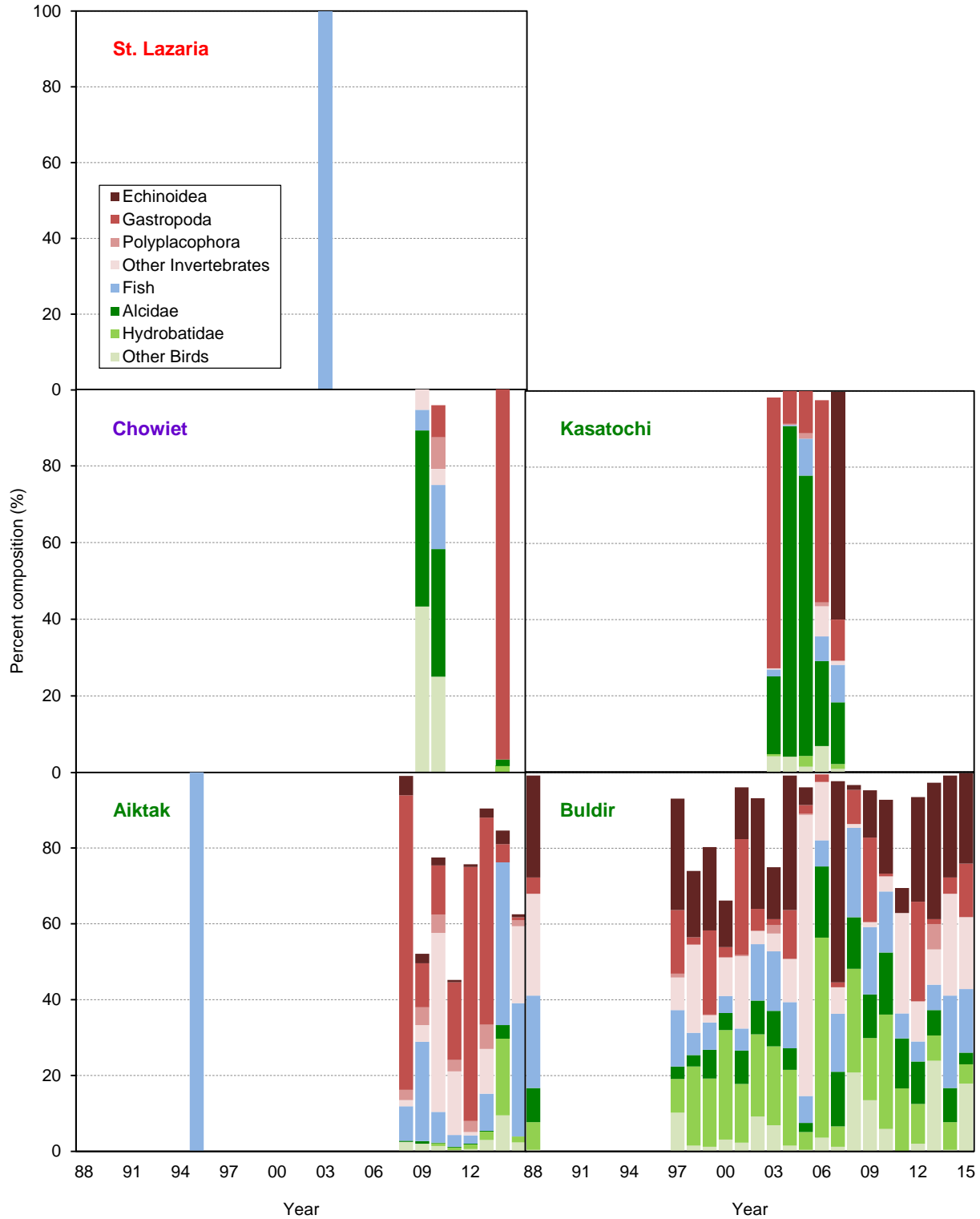


Figure 46. Percent composition of major prey items in diets of glaucous-winged gull adults at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of stomach contents from adults collected at or near the colony and pellets regurgitated by adults at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

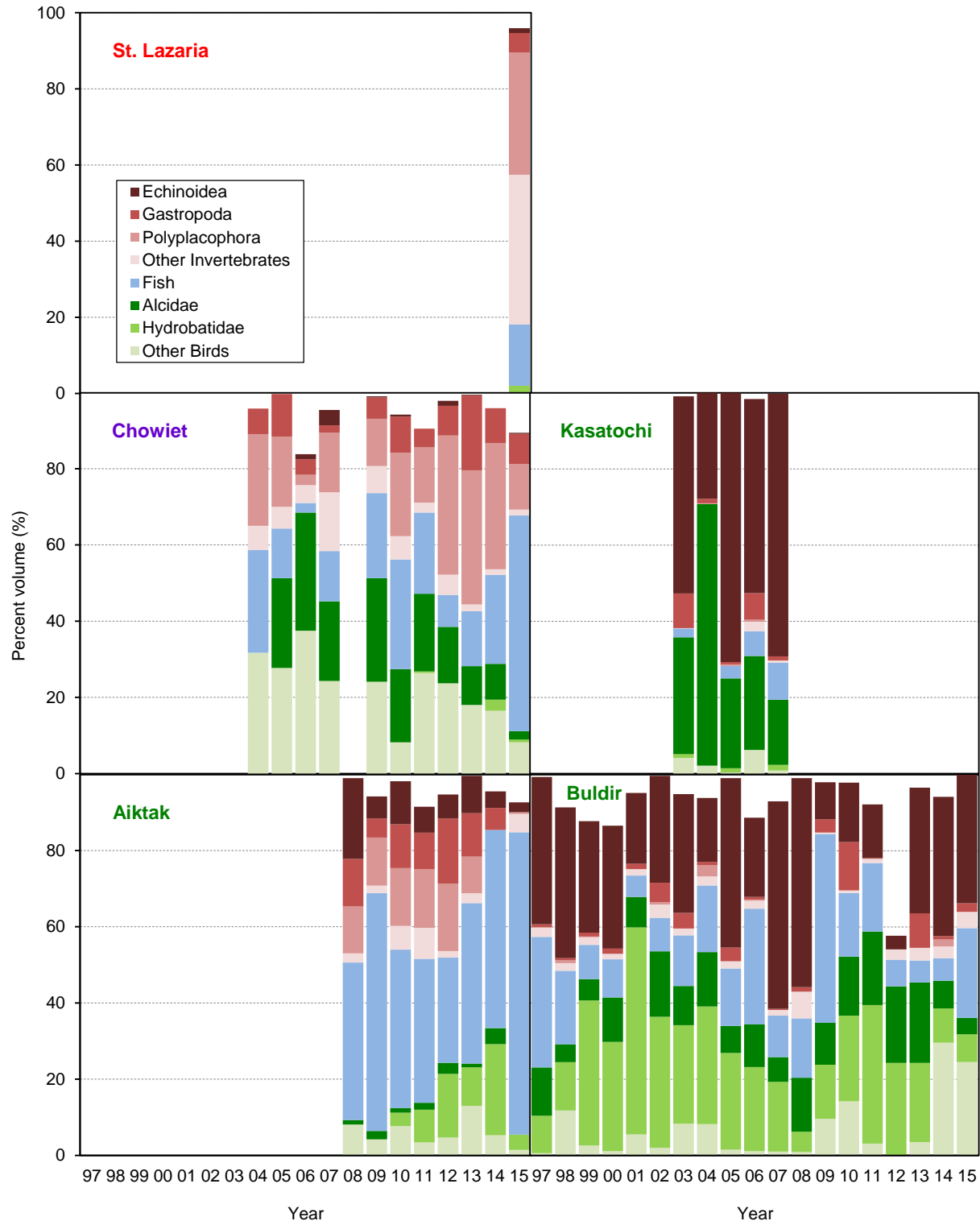


Figure 47. Percent volume of major prey items in diets of glaucous-winged gull adults at sites within the Alaska Maritime National Wildlife Refuge. Values represent the average percent composition of a prey item in all pellets. Samples consist of stomach contents from adults collected at or near the colony and pellets regurgitated by adults at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, purple = Alaska Peninsula, green = Aleutian Islands.

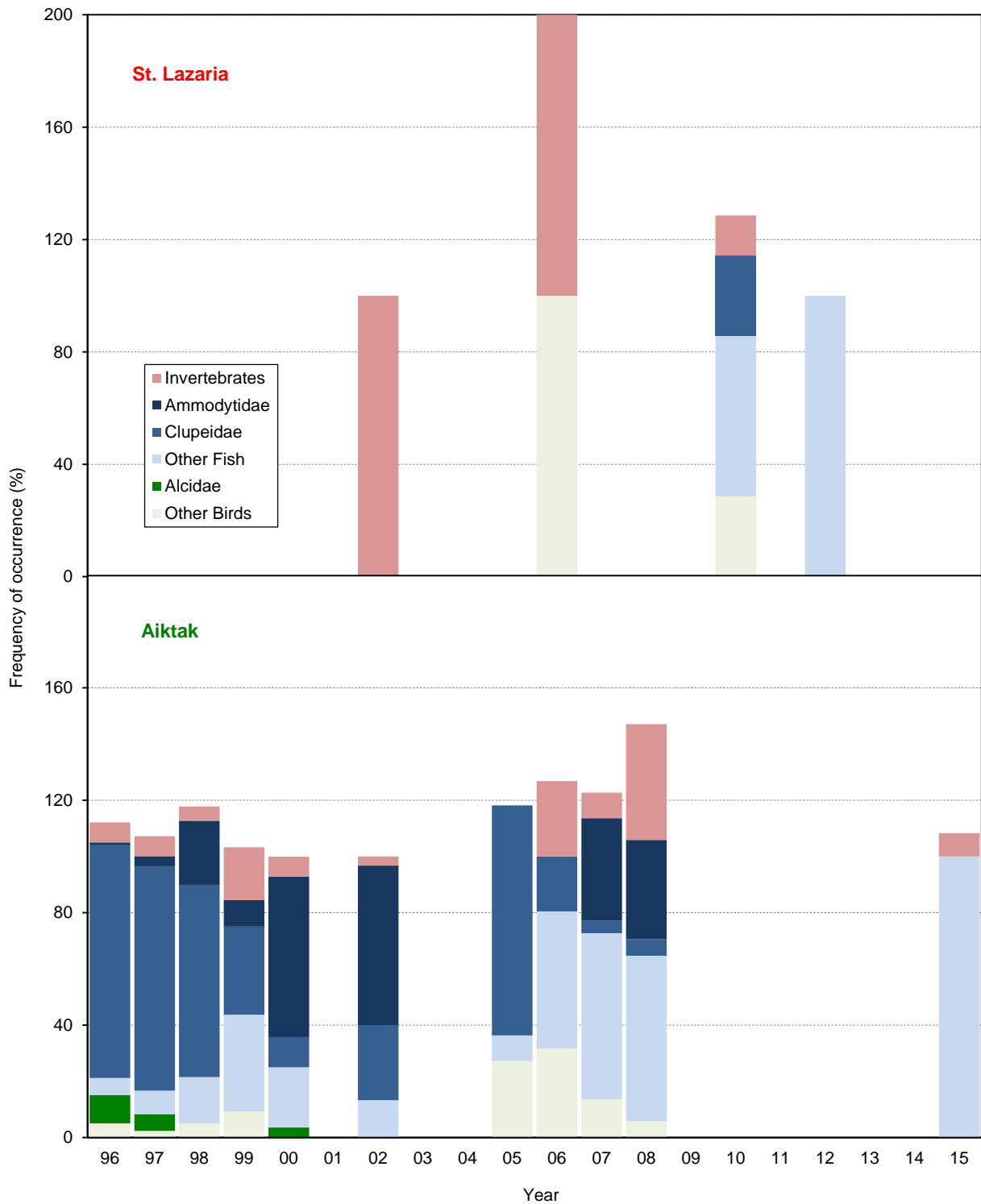


Figure 48. Frequency of occurrence of major prey items in diets of glaucous-winged gull chicks at sites within the Alaska Maritime National Wildlife Refuge. Frequency is expressed as the percentage of food samples in which each prey item was present. Samples consist of boluses collected at the colony and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands.

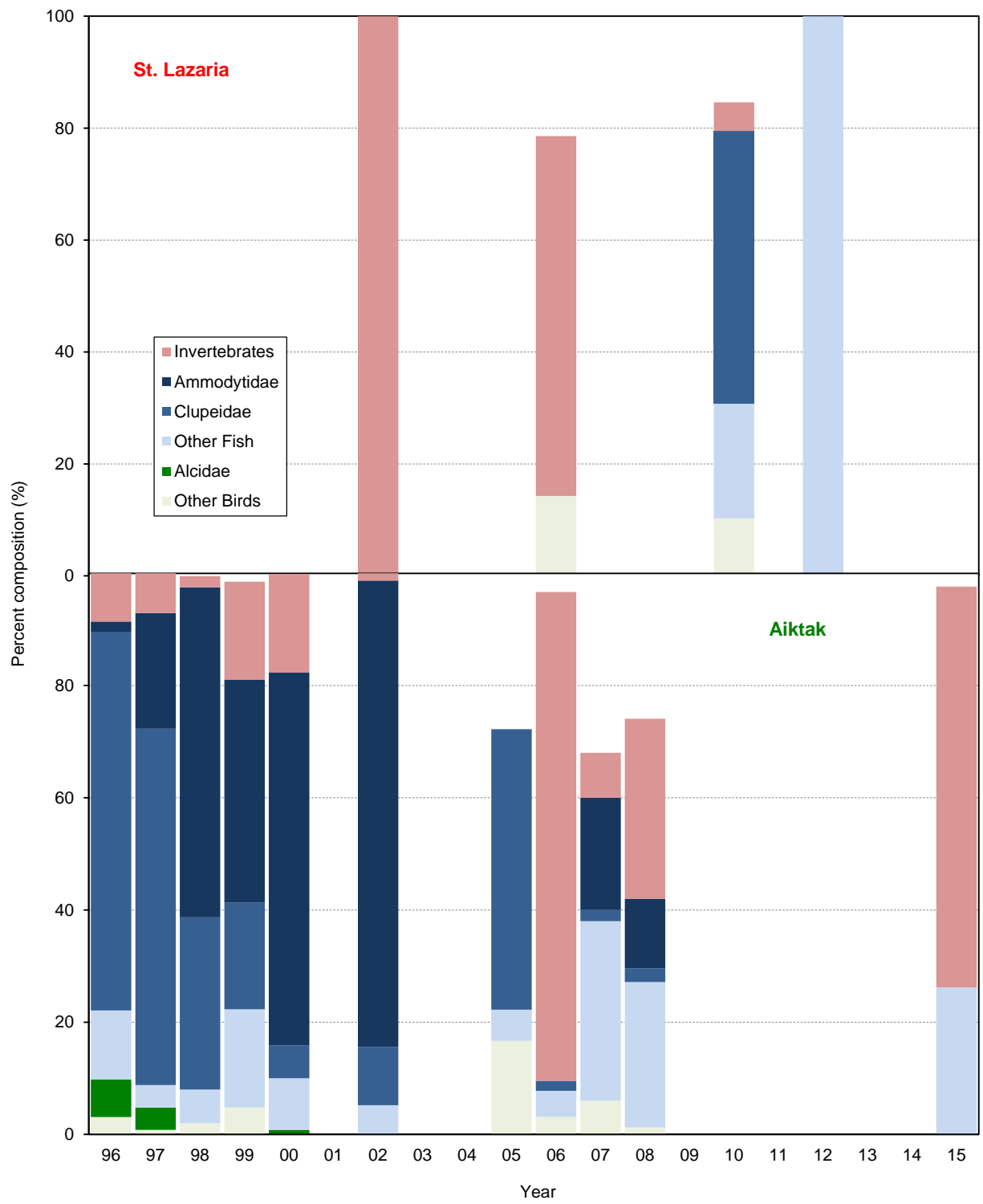


Figure 49. Percent composition of major prey items in diets of glaucous-winged gull chicks at sites within the Alaska Maritime National Wildlife Refuge. Values are expressed as the percentage of total individual prey items comprised by each prey item. Samples consist of boluses collected at the colony and regurgitations collected from chicks at the colony; see tables for sampling specifics per site and year and more detailed diet information. Only sites with ≥ 5 years of data or ongoing diet sampling are shown. Colors in island name indicate geographic units; red = Gulf of Alaska, green = Aleutian Islands.

Appendix A (continued). All invertebrate prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

			Bird species ^a																																	
Taxa			COEI	HARD	WWSC	NOFU	STSH	FTSP	LHSP	UNST	RFCE	PECO	BLOY	COMU	TBMU	UNMU	PIGU	MAMU	ANMU	CAAU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	BLKI	RLKI	UNKI	MEGU	GWGU	GLGU	UUUU		
Invertebrate	Amphipoda	Gammaridea	<i>Melita</i> spp.												X							X														
Invertebrate	Amphipoda	Gammaridea	Melphidippidae																			X														
Invertebrate	Amphipoda	Gammaridea	<i>Monoculodes</i> spp.																			X														
Invertebrate	Amphipoda	Gammaridea	Oedicerotidae				X															X						X								
Invertebrate	Amphipoda	Gammaridea	<i>Onisimus</i> spp.												X																					
Invertebrate	Amphipoda	Gammaridea	<i>Orchestia ochotensis</i>																															X		
Invertebrate	Amphipoda	Gammaridea	<i>Orchomene</i> spp.					X	X						X							X						X	X							
Invertebrate	Amphipoda	Gammaridea	<i>Paracallisoma coecum</i>				X	X							X													X	X							
Invertebrate	Amphipoda	Gammaridea	<i>Parapleustes johanseni</i>								X																									
Invertebrate	Amphipoda	Gammaridea	<i>Parapleustes</i> spp.								X																									
Invertebrate	Amphipoda	Gammaridea	<i>Photis</i> spp.						X																											
Invertebrate	Amphipoda	Gammaridea	<i>Pleustes panoplus</i>								X																									
Invertebrate	Amphipoda	Gammaridea	Pleustidae					X		X													X													
Invertebrate	Amphipoda	Gammaridea	<i>Pleusymtes</i> spp.								X												X													
Invertebrate	Amphipoda	Gammaridea	Podoceridae																				X													
Invertebrate	Amphipoda	Gammaridea	<i>Pontogeneia makarovi</i>																				X													
Invertebrate	Amphipoda	Gammaridea	<i>Pontogeneia rostrata</i>																				X													
Invertebrate	Amphipoda	Gammaridea	<i>Pontogeneia</i> spp.								X												X													
Invertebrate	Amphipoda	Gammaridea	<i>Pontoporeia affinis</i>																				X													
Invertebrate	Amphipoda	Gammaridea	Stegocephalidae												X																					
Invertebrate	Amphipoda	Gammaridea	Stenothoidae													X							X													
Invertebrate	Amphipoda	Gammaridea	<i>Talitridae</i> spp.												X								X					X	X					X		
Invertebrate	Amphipoda	Gammaridea	<i>Traskorchestia traskiana</i>													X																			X	
Invertebrate	Amphipoda	Gammaridea	<i>Westwoodilla caecula</i>																				X													
Invertebrate	Amphipoda	Gammaridea	<i>Weyprechtia</i> spp.												X																					
Invertebrate	Amphipoda	Gammaridea	Unid. Gammaridea					X	X		X			X	X	X						X	X	X	X			X	X							
Invertebrate	Amphipoda	Hyperiid	<i>Hyperia medusarum</i>					X														X	X	X	X											
Invertebrate	Amphipoda	Hyperiid	<i>Hyperia</i> spp.					X														X	X													
Invertebrate	Amphipoda	Hyperiid	Hyperiid					X	X						X	X						X	X	X	X		X	X	X							
Invertebrate	Amphipoda	Hyperiid	<i>Hyperoche medusarum</i>					X	X													X	X	X	X			X	X							
Invertebrate	Amphipoda	Hyperiid	<i>Hyperoche</i> spp.																			X														
Invertebrate	Amphipoda	Hyperiid	<i>Lycaea</i> spp.						X																											
Invertebrate	Amphipoda	Hyperiid	<i>Primno macropa</i>																			X	X	X	X								X			
Invertebrate	Amphipoda	Hyperiid	<i>Themisto libellula</i>								X			X	X	X					X	X	X	X		X	X	X	X							
Invertebrate	Amphipoda	Hyperiid	<i>Themisto pacifica</i>					X	X	X				X	X						X	X	X	X		X	X	X	X							
Invertebrate	Amphipoda	Hyperiid	<i>Themisto</i> spp.					X	X					X	X						X	X	X	X		X	X	X	X							
Invertebrate	Amphipoda	Hyperiid	<i>Vibilia propinqua</i>						X						X							X	X	X			X	X	X							
Invertebrate	Amphipoda	Unid. Hyperiid	Unid. Hyperiid				X	X	X	X	X			X	X	X					X	X	X	X		X	X	X	X						X	
Invertebrate	Asteroidea	Unid. Asteroidea	Unid. Asteroidea				X	X	X	X	X			X	X	X					X	X	X	X		X	X	X	X						X	

Appendix A (continued). All invertebrate prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

				Bird species ^a																																
Taxa				COEI	HARD	WWSC	NOFU	STSH	FTSP	LHSP	UNST	RFKO	PECO	BLOY	COMU	TBMU	UNMU	PIGU	MAMU	ANMU	CAAU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	BLKI	RLKI	UNKI	MEGU	GWGU	GLGU	UUUU	
Invertebrate	Bivalva	Myiidae	<i>Mya</i> spp.																																	X
Invertebrate	Bivalva	Mytilidae	Unid. Mytilidae											X														X						X		
Invertebrate	Bivalva	Nuculanidae	<i>Nuculana</i> spp.												X												X									
Invertebrate	Bivalva	Tellinidae	<i>Macoma</i> spp.												X																					
Invertebrate	Bivalva		Unid. Bivalvia								X				X	X						X					X	X					X			
Invertebrate	Bryozoa		Unid. Bryozoa												X	X											X	X						X		
Invertebrate	Cephalopoda	Gonatidae	<i>Berryteuthis magister</i>												X	X										X	X	X	X							
Invertebrate	Cephalopoda	Gonatidae	<i>Gonatopsis borealis</i>													X											X									
Invertebrate	Cephalopoda	Gonatidae	<i>Gonatopsis makko</i>																								X									
Invertebrate	Cephalopoda	Gonatidae	<i>Gonatus kamtschaticus</i>																								X	X								
Invertebrate	Cephalopoda	Gonatidae	<i>Gonatus madokai</i>																								X	X								
Invertebrate	Cephalopoda	Gonatidae	<i>Gonatus</i> spp.												X	X										X	X	X	X							
Invertebrate	Cephalopoda	Gonatidae	Unid. Gonatidae				X	X	X	X	X	X	X		X	X						X			X	X	X	X	X					X		
Invertebrate	Cephalopoda	Loliginidae	<i>Loligo opalescens</i>																							X	X	X	X							
Invertebrate	Cephalopoda	Octopodidae	<i>Enteroctopus dofleini</i>																								X									
Invertebrate	Cephalopoda	Octopodidae	Unid. Octopodidae							X					X	X							X		X	X	X	X	X							
Invertebrate	Cephalopoda	Sepiolidae	<i>Rossia pacifica</i>																								X									
Invertebrate	Cephalopoda		Unid. Coleoidea																				X		X											
Invertebrate	Cephalopoda		Unid. Decabrachia				X	X	X	X	X	X	X		X	X		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Invertebrate	Cephalopoda		Unid. Octopoda						X														X		X	X	X	X								
Invertebrate	Cephalopoda		Unid. Cephalopoda						X	X		X											X	X	X	X	X	X	X					X		
Invertebrate	Cnidaria		Unid. Scyphozoa						X															X				X								
Invertebrate	Cnidaria		Unid. Cnidaria										X																							
Invertebrate	Copepoda	Acartiidae	<i>Acartia longiremis</i>																					X												
Invertebrate	Copepoda	Augaptilidae	<i>Pseudhaloptilus pacificus</i>																					X	X											
Invertebrate	Copepoda	Calanidae	<i>Calanus glacialis</i>																					X												
Invertebrate	Copepoda	Calanidae	<i>Calanus hyperboreus</i>																								X									
Invertebrate	Copepoda	Calanidae	<i>Calanus marshallae</i>																					X	X	X										
Invertebrate	Copepoda	Calanidae	<i>Calanus marshallae/glacialis</i>						X																											
Invertebrate	Copepoda	Calanidae	<i>Calanus pacificus</i>																					X	X											
Invertebrate	Copepoda	Calanidae	<i>Calanus</i> spp.						X	X	X				X								X	X				X	X							
Invertebrate	Copepoda	Calanidae	<i>Neocalanus cristatus</i>						X	X	X												X	X	X	X		X	X							
Invertebrate	Copepoda	Calanidae	<i>Neocalanus flemingeri</i>																					X												
Invertebrate	Copepoda	Calanidae	<i>Neocalanus plumchrus</i>																					X	X			X								
Invertebrate	Copepoda	Calanidae	<i>Neocalanus plumchrus/flemengeri</i>						X	X	X												X	X	X	X		X	X							
Invertebrate	Copepoda	Calanidae	<i>Neocalanus</i> spp.						X	X																	X	X								
Invertebrate	Copepoda	Calanidae	Unid. Calanidae						X	X													X	X	X	X		X	X							
Invertebrate	Copepoda	Candaciidae	<i>Candacia columbiae</i>																					X	X										X	
Invertebrate	Copepoda	Candaciidae	<i>Candacia</i> spp.						X																											
Invertebrate	Copepoda	Centropagidae	<i>Centropages abdominalis</i>																					X												

Appendix A (continued). All invertebrate prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

				Bird species ^a																																
Taxa				COEI	HARD	WWSC	NOFU	STSH	FTSP	LHSP	UNST	RFCE	PECO	BLOY	COMU	TBMU	UNMU	PIGU	MAMU	ANMU	CAAU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	BLKI	RLKI	UNKI	MEGU	GWGU	GLGU	UUUU	
Invertebrate	Decapoda	Brachyura	Unid. Brachyura						X	X		X			X	X					X	X	X	X	X		X	X	X							
Invertebrate	Decapoda	Caridea	<i>Argis crassa</i>						X	X		X									X	X	X	X	X		X	X	X							
Invertebrate	Decapoda	Caridea	<i>Argis lar</i>												X																					
Invertebrate	Decapoda	Caridea	<i>Argis</i> spp.									X											X													
Invertebrate	Decapoda	Caridea	<i>Crangon</i> spp.																				X													
Invertebrate	Decapoda	Caridea	Crangonidae													X						X	X	X			X	X						X		
Invertebrate	Decapoda	Caridea	<i>Eualus gaimardii</i>												X	X																				
Invertebrate	Decapoda	Caridea	<i>Eualus</i> spp.												X																					
Invertebrate	Decapoda	Caridea	<i>Heptacarpus moseri</i>												X																					
Invertebrate	Decapoda	Caridea	Hippolytidae							X												X	X	X	X		X	X	X							
Invertebrate	Decapoda	Caridea	<i>Hymenodora frontalis</i>						X	X																			X	X						
Invertebrate	Decapoda	Caridea	<i>Hymenodora</i> spp.						X	X												X								X						
Invertebrate	Decapoda	Caridea	<i>Lebbeus grandimana</i>									X				X																				
Invertebrate	Decapoda	Caridea	<i>Lebbeus groenlandicus</i>									X				X																				
Invertebrate	Decapoda	Caridea	<i>Lebbeus polaris</i>									X																	X							X
Invertebrate	Decapoda	Caridea	<i>Lebbeus unalaskensis</i>									X																								
Invertebrate	Decapoda	Caridea	Oplophoridae						X	X																										X
Invertebrate	Decapoda	Caridea	Pandalidae						X	X	X											X	X	X	X	X		X	X	X						
Invertebrate	Decapoda	Caridea	<i>Pandalus goniurus</i>													X													X							
Invertebrate	Decapoda	Caridea	<i>Pandalus jordani</i>													X													X							
Invertebrate	Decapoda	Caridea	<i>Pandalus montagui</i>													X																				
Invertebrate	Decapoda	Caridea	<i>Pandalus platyceros</i>																				X	X												
Invertebrate	Decapoda	Caridea	<i>Pandalus tridens</i>									X				X														X						
Invertebrate	Decapoda	Caridea	<i>Pandalus</i> spp.												X	X							X	X			X	X	X							
Invertebrate	Decapoda	Caridea	<i>Paracrangon</i> spp.																				X		X				X	X	X					
Invertebrate	Decapoda	Caridea	<i>Sclerocrangon</i> spp.													X							X	X					X							
Invertebrate	Decapoda	Caridea	<i>Spirontocaris</i> spp.													X		X											X							
Invertebrate	Decapoda	Caridea	Unid. Caridea				X		X	X	X	X	X		X	X	X				X	X	X	X	X		X	X	X	X	X			X		
Invertebrate	Decapoda	Dendrobranchiata	<i>Litopenaeus vannamei</i>						X	X																										
Invertebrate	Decapoda	Dendrobranchiata	Sergestidae																				X	X	X											
Invertebrate	Decapoda	Dendrobranchiata	Unid. Dendrobranchiata							X																			X	X						
Invertebrate	Decapoda	Epialtidae	<i>Pugettia</i> spp.																																	X
Invertebrate	Decapoda	Unid. Majoidea								X													X	X												
Invertebrate	Decapoda	Unid. Pleocyemata crab		X					X	X		X	X	X	X	X						X	X	X	X		X	X	X						X	
Invertebrate	Decapoda	Unid. Decapoda							X	X		X			X	X						X	X	X	X		X	X	X							
Invertebrate	Echinoidea	Unid. Clypeasteroidea													X																					
Invertebrate	Echinoidea	Unid. Euechinoidea				X					X																									X
Invertebrate	Euphausiacea	Euphausiidae	<i>Euphausia pacifica</i>						X	X												X	X	X	X		X	X	X							
Invertebrate	Euphausiacea	Euphausiidae	<i>Thysanoessa inermis</i>						X	X					X	X	X				X	X	X	X	X		X	X	X							
Invertebrate	Euphausiacea	Euphausiidae	<i>Thysanoessa inspinata</i>							X												X	X	X	X		X	X	X							

Appendix A (continued). All invertebrate prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling)..

			Bird species ^a																																	
Taxa			COEI	HARD	WWSC	NOFU	STSH	FTSP	LHSP	UNST	RFKO	PECO	BLOY	COMU	TBMU	UNMU	PIGU	MAMU	ANMU	CAAU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	BLKI	RLKI	UNKI	MEGU	GWGU	GLGU	UUUU		
Invertebrate	Euphausiacea	Euphausiidae						X	X					X	X					X	X	X	X	X		X	X	X								
Invertebrate	Euphausiacea	Euphausiidae													X																					
Invertebrate	Euphausiacea	Euphausiidae												X	X	X				X	X	X	X	X			X	X	X							
Invertebrate	Euphausiacea	Euphausiidae						X	X					X	X					X	X	X	X	X		X	X	X					X			
Invertebrate	Euphausiacea	Euphausiidae		X		X	X	X	X	X	X			X	X	X				X	X	X	X	X		X	X	X	X				X	X		
Invertebrate	Gastropoda	Buccinidae										X																								
Invertebrate	Gastropoda	Clionidae												X								X						X								
Invertebrate	Gastropoda	Limacinidae																		X	X	X	X	X				X								
Invertebrate	Gastropoda	Limacinidae													X					X	X	X	X	X		X	X			X	X					
Invertebrate	Gastropoda	Littorinidae																										X								
Invertebrate	Gastropoda	Littorinidae																										X								
Invertebrate	Gastropoda	Littorinidae											X																							
Invertebrate	Gastropoda	Muricidae											X																							
Invertebrate	Gastropoda	Naticidae																											X							
Invertebrate	Gastropoda	Naticidae										X																								
Invertebrate	Gastropoda	Naticidae																				X														
Invertebrate	Gastropoda	Trochidae														X												X								
Invertebrate	Gastropoda			X							X		X																						X	
Invertebrate	Gastropoda					X			X					X	X						X	X	X	X		X	X	X							X	
Invertebrate	Gastropoda			X				X						X	X	X	X				X	X	X	X		X	X	X							X	
Invertebrate	Gastropoda					X			X		X	X		X							X	X					X	X							X	
Invertebrate	Insecta	Coleoptera																																		X
Invertebrate	Insecta	Diptera																																		X
Invertebrate	Insecta																																			X
Invertebrate	Isopoda	Anuropidae																										X	X							
Invertebrate	Isopoda	Chaetiliidae													X													X								
Invertebrate	Isopoda	Holognathidae																				X														
Invertebrate	Isopoda	Idoteidae										X																								
Invertebrate	Isopoda	Idoteidae																											X							
Invertebrate	Isopoda	Idoteidae														X																				
Invertebrate	Isopoda										X																									
Invertebrate	Isopoda										X				X							X													X	
Invertebrate	Leptostraca	Nebaliidae																										X								
Invertebrate	Lophogastrida	Lophogastridae													X														X							
Invertebrate	Lophogastrida	Lophogastridae								X					X													X	X							
Invertebrate	Mysida	Mysidae																				X														
Invertebrate	Mysida	Mysidae														X																				
Invertebrate	Mysida	Mysidae														X																				

Appendix B. All fish prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

Taxa	Bird species ^a																																			
	NOFU	STSH	FTSP	LHSP	UNST	DCCO	RFCO	PECO	PAJA	COMU	TBMU	UNMU	PIGU	MAMU	KIMU	ANMU	CAAU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	UNPU	BLKI	RLKI	UNKI	BLGU	MEGU	GWGU	UUUU				
Fish	Cephalaspidomorphi	Cephalaspidomorphi									X																X									
Fish	Teleostei	Agonidae	<i>Anoplagonus inermis</i>																					X												
Fish	Teleostei	Agonidae	<i>Aspidophoroides monopterygius</i>																					X												
Fish	Teleostei	Agonidae	<i>Bathyagonus alascanus</i>																					X												
Fish	Teleostei	Agonidae	Unid. Agonidae				X			X	X												X	X												
Fish	Teleostei	Ammodytidae	<i>Ammodytes hexapterus</i>	X	X	X		X	X	X	X	X	X	X	X	X	X						X	X	X	X	X	X	X		X	X	X			
Fish	Teleostei	Anoplopomatidae	<i>Anoplopoma fimbria</i>					X			X												X	X	X											
Fish	Teleostei	Bathylagidae	<i>Leuroglossus schmidtii</i>							X	X													X												
Fish	Teleostei	Bathylagidae	<i>Leuroglossus</i> spp.																					X												
Fish	Teleostei	Bathylagidae	Unid. Bathylagidae																					X												
Fish	Teleostei	Bathymasteridae	<i>Bathymaster leurolepis</i>																					X												
Fish	Teleostei	Bathymasteridae	<i>Bathymaster signatus</i>							X	X													X												
Fish	Teleostei	Bathymasteridae	<i>Ronquilus jordani</i>					X	X														X	X												
Fish	Teleostei	Bathymasteridae	Unid. Bathymasteridae			X					X													X	X											
Fish	Teleostei	Blennioidei	Unid. Blennioidei							X																										
Fish	Teleostei	Clupeidae	<i>Clupea pallasii</i>							X	X												X	X	X		X	X				X	X			
Fish	Teleostei	Clupeidae	<i>Clupea pallasii</i> eggs																								X									
Fish	Teleostei	Cottidae	<i>Artedius</i> spp.					X			X																									
Fish	Teleostei	Cottidae	<i>Enophrys bison</i>								X																									
Fish	Teleostei	Cottidae	<i>Gymnocanthus tricuspis</i>								X																									
Fish	Teleostei	Cottidae	<i>Gymnocanthus</i> spp.					X																												
Fish	Teleostei	Cottidae	<i>Hemilepidotus hemilepidotus</i>								X													X	X			X								
Fish	Teleostei	Cottidae	<i>Hemilepidotus jordani</i>					X	X															X	X											
Fish	Teleostei	Cottidae	<i>Hemilepidotus</i> spp.					X			X													X	X			X								
Fish	Teleostei	Cottidae	<i>Icelinus borealis</i>					X																												
Fish	Teleostei	Cottidae	<i>Icelus spatula</i>								X																									
Fish	Teleostei	Cottidae	<i>Icelus spiniger</i>																					X												
Fish	Teleostei	Cottidae	<i>Icelus</i> spp.								X																									
Fish	Teleostei	Cottidae	<i>Myoxocephalus quadricornis</i>					X																												
Fish	Teleostei	Cottidae	<i>Myoxocephalus</i> spp.					X	X		X																									
Fish	Teleostei	Cottidae	<i>Phalloctotus obtusus</i>																					X	X											
Fish	Teleostei	Cottidae	<i>Ruscarius meanyi</i>																					X												
Fish	Teleostei	Cottidae	<i>Triglops forficatus</i>																					X												
Fish	Teleostei	Cottidae	<i>Triglops pingelii</i>					X		X		X												X					X							
Fish	Teleostei	Cottidae	<i>Triglops</i> spp.					X		X		X												X												
Fish	Teleostei	Cottidae	Unid. Cottidae	X	X	X		X	X	X	X	X	X										X	X		X			X							
Fish	Teleostei	Cryptacanthodidae	<i>Cryptacanthodes giganteus</i>																					X												
Fish	Teleostei	Cyclopteridae	<i>Eumicrotremus orbis</i>																					X												
Fish	Teleostei	Cyclopteridae	Unid. Cyclopteridae							X	X													X												
Fish	Teleostei	Gadidae	<i>Arctogadus glacialis</i>							X																										

Appendix B (continued). All fish prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

Taxa			Bird species ^a																																
			NOFU	STSH	FTSP	LHSP	UNST	DCCO	RFCO	PECO	PAJA	COMU	TBMU	UNMU	PIGU	MAMU	KIMU	ANMU	CAAU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	UNPU	BLKI	RLKI	UNKI	BLGU	MEGU	GWGU	UUUU	
Fish	Teleostei	Gadidae	<i>Boreogadus saida</i>							X	X	X												X	X		X	X		X					
Fish	Teleostei	Gadidae	<i>Eleginus gracilis</i>							X	X	X							X	X		X		X	X		X			X			X		
Fish	Teleostei	Gadidae	Gadinae							X	X	X			X	X								X	X		X	X					X		
Fish	Teleostei	Gadidae	<i>Gadus chalcogrammus</i>	X	X				X	X	X	X	X	X	X	X		X	X	X				X	X	X	X	X	X				X	X	
Fish	Teleostei	Gadidae	<i>Gadus macrocephalus</i>							X	X	X	X	X	X								X	X	X	X	X	X							
Fish	Teleostei	Gadidae	<i>Gadus</i> spp.									X												X	X	X	X	X							
Fish	Teleostei	Gadidae	<i>Microgadus proximus</i>			X																		X	X										
Fish	Teleostei	Gadidae	Unid. Gadidae			X	X			X	X	X							X				X	X	X	X	X	X				X	X		
Fish	Teleostei	Unid. Gadiformes										X	X											X											
Fish	Teleostei	Gasterosteidae	<i>Gasterosteus aculeatus</i>																				X	X											
Fish	Teleostei	Gasterosteidae	<i>Pungitius pungitius</i>																																
Fish	Teleostei	Gasterosteidae	Unid. Gasterosteidae									X	X																						
Fish	Teleostei	Hemitripterae	<i>Blepsias bilobus</i>										X											X	X										
Fish	Teleostei	Hemitripterae	<i>Blepsias cirrhosus</i>																					X	X										
Fish	Teleostei	Hemitripterae	<i>Hemitripterus bolini</i>																						X										
Fish	Teleostei	Hemitripterae	<i>Nautichthys oculofasciatus</i>																						X										
Fish	Teleostei	Hemitripterae	<i>Nautichthys pribilovius</i>																						X										
Fish	Teleostei	Hexagrammidae	<i>Hexagrammos decagrammus</i>									X		X									X	X	X	X									
Fish	Teleostei	Hexagrammidae	<i>Hexagrammos lagocephalus</i>																					X	X	X									
Fish	Teleostei	Hexagrammidae	<i>Hexagrammos octogrammus</i>									X												X											
Fish	Teleostei	Hexagrammidae	<i>Hexagrammos stelleri</i>									X	X																						
Fish	Teleostei	Hexagrammidae	<i>Hexagrammos</i> spp.			X		X				X		X									X	X	X	X	X								
Fish	Teleostei	Hexagrammidae	<i>Ophiodon elongatus</i>																				X	X	X										
Fish	Teleostei	Hexagrammidae	<i>Pleurogrammus monopterygius</i>	X									X											X	X	X	X	X	X				X		
Fish	Teleostei	Hexagrammidae	Unid. Hexagrammidae				X					X	X	X				X					X	X	X	X	X	X							
Fish	Teleostei	Liparidae	<i>Careproctus</i> spp.																								X								
Fish	Teleostei	Liparidae	<i>Liparis florum</i>																						X										
Fish	Teleostei	Liparidae	<i>Liparis</i> spp.										X																						
Fish	Teleostei	Liparidae	Unid. Liparidae						X			X													X			X							
Fish	Teleostei	Melamphaidae	<i>Melamphaes lugubris</i>				X																												
Fish	Teleostei	Melamphaidae	<i>Poromitra crassiceps</i>																																X
Fish	Teleostei	Myctophidae	<i>Diaphus theta</i>																																X
Fish	Teleostei	Myctophidae	<i>Lampanyctus jordani</i>																										X	X					
Fish	Teleostei	Myctophidae	<i>Lampanyctus</i> spp.																										X	X					
Fish	Teleostei	Myctophidae	<i>Nannobranchium regale</i>																										X	X					
Fish	Teleostei	Myctophidae	<i>Protomyctophum thompsoni</i>			X	X																						X						
Fish	Teleostei	Myctophidae	<i>Stenobranchius leucopsarus</i>			X	X					X	X												X	X		X	X						
Fish	Teleostei	Myctophidae	<i>Stenobranchius nannochir</i>			X	X																		X	X		X	X						
Fish	Teleostei	Myctophidae	<i>Stenobranchius</i> spp.			X																			X			X	X						
Fish	Teleostei	Myctophidae	Unid. Myctophidae	X	X	X	X		X	X	X	X	X	X					X					X	X		X	X					X		

Appendix C. All bird prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

Taxa			Bird species ^a			
			COMU	BLKI	RLKI	GWGU
Bird	Anseriformes	Anatidae	<i>Branta hutchinsii leucopareia</i>			X
Bird	Anseriformes	Anatidae	<i>Branta hutchinsii leucopareia</i> egg			X
Bird	Charadriiformes	Alcidae	<i>Aethia cristatella</i>			X
Bird	Charadriiformes	Alcidae	<i>Aethia psittacula</i>			X
Bird	Charadriiformes	Alcidae	<i>Aethia psittacula</i> or <i>cristatella</i>			X
Bird	Charadriiformes	Alcidae	<i>Aethia pusilla</i>			X
Bird	Charadriiformes	Alcidae	<i>Aethia pusilla</i> or <i>pygmaea</i>			X
Bird	Charadriiformes	Alcidae	<i>Aethia pygmaea</i>			X
Bird	Charadriiformes	Alcidae	<i>Aethia</i> spp.			X
Bird	Charadriiformes	Alcidae	<i>Aethia</i> spp. chick			X
Bird	Charadriiformes	Alcidae	<i>Cerorhinca monocerata</i>			X
Bird	Charadriiformes	Alcidae	<i>Fratercula cirrhata</i>			X
Bird	Charadriiformes	Alcidae	<i>Fratercula cirrhata</i> chick			X
Bird	Charadriiformes	Alcidae	<i>Fratercula corniculata</i>			X
Bird	Charadriiformes	Alcidae	<i>Fratercula</i> spp.			X
Bird	Charadriiformes	Alcidae	<i>Fratercula</i> spp. chick			X
Bird	Charadriiformes	Alcidae	<i>Ptychoramphus aleuticus</i>			X
Bird	Charadriiformes	Alcidae	<i>Synthliboramphus antiquus</i>			X
Bird	Charadriiformes	Alcidae	<i>Uria</i> spp.			X
Bird	Charadriiformes	Alcidae	<i>Uria</i> spp. egg			X
Bird	Charadriiformes	Alcidae	<i>Uria</i> spp. chick			X
Bird	Charadriiformes	Alcidae	Unid. Alcidae			X
Bird	Charadriiformes	Alcidae	Unid. Alcidae chick			X
Bird	Charadriiformes	Laridae	<i>Larus glaucescens</i>			X
Bird	Charadriiformes	Laridae	<i>Larus glaucescens</i> egg			X
Bird	Charadriiformes	Laridae	<i>Larus glaucescens</i> chick			X
Bird	Charadriiformes	Laridae	<i>Rissa tridactyla</i> chick		X	X
Bird	Charadriiformes	Laridae	<i>Rissa</i> spp.			X
Bird	Charadriiformes	Laridae	<i>Rissa</i> spp. chick			X
Bird	Passeriformes	Emberizidae	<i>Calcarius lapponicus</i>			X
Bird	Passeriformes	Fringillidae	<i>Leucosticte tephrocotis</i>			X
Bird	Passeriformes	Troglodytidae	<i>Troglodytes pacificus</i>			X
Bird	Passeriformes		Unid. Passeriformes			X
Bird	Procellariiformes	Hydrobatidae	<i>Oceanodroma furcata</i>			X
Bird	Procellariiformes	Hydrobatidae	<i>Oceanodroma leucorhoa</i>			X
Bird	Procellariiformes	Hydrobatidae	<i>Oceanodroma</i> spp.			X
Bird	Procellariiformes	Procellariidae	<i>Fulmarus glacialis</i>			X
Bird	Procellariiformes	Procellariidae	<i>Fulmarus glacialis</i> egg			X
Bird			Unid. Aves			X
Bird			Unid. Aves egg	X	X	X

^aSpecies abbreviations follow American Ornithologist Union (AOU) convention: BLKI=black-legged kittiwake, COMU=common murre, GWGU=glaucous-winged gull, RLKI=red-legged kittiwake.

Appendix D. All mammal prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

Taxa			Bird species ^a	
			COMU	GWGU
Mammal	Carnivora	Otariidae	<i>Eumetopias jubatus</i>	X
Mammal	Rodentia		Unid. Rodentia	X
Mammal	Rodentia	Muridae	<i>Arvicolinae</i> spp.	X
Mammal	Rodentia	Muridae	<i>Microtus oeconomus</i>	X
Mammal	Rodentia	Sciuridae	<i>Urocitellus parryii</i>	X
Mammal			Unid. Mammalia	X

^aSpecies abbreviations follow American Ornithologist Union (AOU) convention: GWGU=glaucous-winged gull.

Appendix E. All other prey items found in bird diets at sites within the Alaska Maritime National Wildlife Refuge. Data include all refuge diet data that currently exist from all bird species and sites (regardless of number of years of data or ongoing sampling).

				Bird species ^a																				
Taxa				HARD	NOFU	STSH	FTSP	LHSP	RFCO	COMU	TBMU	PIGU	CAAU	PAAU	LEAU	WHAU	CRAU	HOPU	TUPU	BLKI	RLKI	MEGU	GWGU	GLGU
Other	Appendicularia	Oikopleuridae	<i>Oikopleura</i> spp.												X									
Other	Appendicularia		Unid. Appendicularia						X															
Other			<i>Cornus suecica</i>																					X
Other			<i>Empetrum nigrum</i>																					X
Other			Kelp																					X
Other			Offal				X	X												X	X			X
Other			<i>Ovis</i> spp.																					X
Other			Plastic	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Other			Rocks																					X
Other			Sand																					X
Other			Terrestrial vegetation																					X
Other			Unid. Egg				X	X							X					X	X			X
Other			Unid. Marine kelp/seaweed/algae																					X
Other			Wood																					X
Other			Unidentified		X		X	X	X	X	X			X	X	X	X	X	X	X	X			X

^aSpecies abbreviations follow American Ornithologist Union (AOU) convention: BLKI=black-legged kittiwake, CAAU=Cassin's auklet, COMU=common murre, CRAU=crested auklet, FTSP=fork-tailed storm-petrel, GLGU=glaucous gull, GWGU=glaucous-winged gull, HARD=harlequin duck, HOPU=horned puffin, LEAU=least auklet, LHSP=Leach's storm-petrel, MEGU=mew gull, NOFU=northern fulmar, PAAU=parakeet auklet, PIGU=pigeon guillemot, RFCO=red-faced cormorant, RLKI=red-legged kittiwake, STSH=short-tailed shearwater, TBMU=thick-billed murre, WHAU=whiskered auklet.