

FOOD HABITS OF SMALL MARINE MAMMALS FROM THE GULF OF MAINE AND FROM
SLOPE WATER OFF THE NORTHEAST US COAST

Year 3, Final Report. revised

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Food Habits of Small Marine Mammals from the Gulf of Maine and from Slope Water off the Northeast US Coast: Year 3 Final Report

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During the past three years (October 2002-September 2005) we have processed 160 stomachs: 109 seals of four species, and 51 cetaceans of nine species. Seal stomachs analyzed were 101 harbor seals (*Phoca vitulina*), six gray seals (*Halichoerus grypus*), one harp seal (*Pagophilus groenlandica*), and one hooded seal (*Chrystophora cristata*). Cetacean stomachs analyzed were: 11 common dolphins (*Delphinus delphis*), 14 Atlantic spotted dolphins (*Stenella frontalis*), 19 white-sided dolphins (*Lagenorhynchus acutus*), two pantropical spotted dolphins (*Stenella attenuata*), one beluga (*Delphinapterus leucas* aka 'Poco' found at South Portland, Maine), one minke whale (*Balaenoptera acutorostrata*), one longfinned pilot whale (*Globicephala melas*), one humpback whale (*Megaptera novaeangliae*), and one Sowerby's beaked whale (*Mesoplodon bidens*).

In addition to the stomach analyses we produced regressions of otolith length vs. fish length and vs. fish weight for nine species of, mostly deepwater, fishes.

Methods

Stomachs were primarily from by-caught animals received from the archival freezer at NMFS, Woods Hole, except for a few direct transfers from stranded animals.

We followed the standard procedures as described in the RFQ protocol for stomach contents analysis. Specifically we partially thawed stomachs and then weighed these stomachs full and empty to determine the weight of contents and size of the stomachs. We separated, weighed, and measured any non-trace prey, and washed the remaining contents through nested sieves, removing soft tissue and retaining all hard parts. We removed larger volumes of muscle by washing with very hot water, sometimes placing prey in hot water and then soaking overnight, before elutriation through the nested sieves.

Otoliths were identified, counted, and stored dry. The remaining bones were dried and then weighed. Certain diagnostic bones (e.g. dentaries, premaxillaries, and maxillaries) were identified and stored separately. Only in a few species (*Chauliodus*, *Stomias*, *Sigmops*, *Nemichthys*) did we have more jawbones than otoliths. Lenses were dried and counted. Squid beaks, nematodes, and other invertebrates were counted and preserved in 70% ethanol. The contents of each stomach are archived separately.

Common non-trace fishes were measured, weighed, and discarded after their otoliths had been removed. Certain non-trace fishes were fixed in 10% formalin and transferred to 70% ethanol for storage. Non-trace squid were weighed and measured and preserved in 70% ethanol.

Results

At least 22 species of fishes were found in the seals (Table 1), and at least 35 fishes were found in the dolphins (Table 2). The seal stomachs contained 3847 otoliths, the most abundant prey species being silver hake (*Merluccius bilinearis*). The dolphin stomachs contained 25,748 otoliths. Silver hake was also the most abundant species in the white-sided dolphins, which were caught in the deeper waters of the southern Gulf of Maine. Horned lanternfish (*Ceratoscopelus maderensis*) was the most abundant species in the other three dolphin species, which were taken in deeper waters south of New England.

Harbor seal (*Phoca vitulina*) (Table 3; Figure 1)

Of the 101 harbor seals analyzed, 97 were from the southwestern Gulf of Maine off Cape Ann and New Hampshire. Most, if not all, were young-of-the-year by-caught in sink gillnets, 71 during July and August. The average length was 90.3 cm (range 62-127 cm); only eight were larger than 107 cm.

The harbor seals had eaten at least 20 species of fishes. A total of 3802 otoliths were present (37.6 otoliths/stomach). Silver hake, Acadian redfish (*Sebastes fasciatus*), and red/white hake (*Urophycis chuss/tenuis*) were the three most abundant prey species, making up 63.4, 9.2, and 7.5 percent of the fishes from the stomachs, respectively. Four gadids (rockling *Enchelyopus cimbrius*, cod *Gadus morhua*, haddock *Melanogrammus aeglefinus*, and pollock *Pollachius virens*) made up only 5.3 percent of the prey fishes. Three flatfishes (smallmouth flounder *Etropus microstomus*, American plaice *Hippoglossoides platessoides*, and yellowtail flounder *Limanda ferruginea*) made up only 3.3 percent. Sand lances (*Ammodytes dubius*, *A. americanus*) were not present in our stomachs.

The stomachs also contained 83 squid beaks, most of them long-finned squid (*Loligo pealei*), from 12 stomachs. Also, 9396 nematodes (93.0/stomach) were present.

Gray seal (*Halichoerus grypus*), harp seal (*Pagophilus groenlandica*), and hooded seal (*Chrystophora cristata*) (Table 4)

The few stomachs of these three seal species were done following necropsies for a quick comparison with harbor seals. Unlike the harbor seals, the stomach contents of these three species were not dominated by silver hake.

The six gray seals had eaten at least ten species of fishes, the most abundant being sand lance (19.0 % of all fishes), red fish (15.5 %) and red hake (7.7%). Flat fishes, most unidentified to species, together comprised 40.8 % of the fishes consumed. The stomachs contained a mixture of benthic (flatfishes), demersal (cod, hake), and pelagic (river herrings *Alosa* spp., Atlantic herring *Clupea harengus*, mackerel *Scomber scombrus*) fishes. The data for the gray seal stomachs are to be used as part of a master's thesis by Kristen Ampela, Biology Department, CSI/CUNY.

Common dolphin (*Delphinus delphis*) (Table 5; Figure 2)

Seven net-caught common dolphin stomachs contained 7277 otoliths of at least 22 species of, mostly, small mesopelagic fishes – an average of 1040 otoliths (about 520 fishes) per stomach. Horned lanternfish dominated the stomachs – 6220 otoliths, 85.5 % of all otoliths, occurring in five of the seven net-caught dolphins. Five of the six most abundant species in the stomachs were lanternfishes, only butterfly *Peprilus* (second ranked) was not a lanternfish. There were 6649 otoliths from the seven species of lanternfishes in the stomachs, 91.4 % of all otoliths present. In addition to otoliths, the stomachs contained 23 ethmoverms of snipe eels (*Nemichthys scolopaceus*) and 796 small, mostly unidentified, squid beaks – *Histioteuthis*, *Enoploteuthis*, and *Abralia/Abraliopsis* were present. Four common dolphin stomachs from stranded animals were empty.

White-sided dolphin (*Lagenorhynchus acutus*) (Table 6; Figure 1)

Our white-sided dolphins came from Cape Cod Bay (six strandings, 144 otoliths) and from the Gulf of Maine (13 net caught animals, 1462 otoliths).

The net-caught dolphins were from relatively deeper water in the Gulf of Maine, average depth 202 m (range 144 to 265 m). We had no animals from the continental slope south of Georges Bank. At least 13 species of fishes were present in these stomachs, the most abundant being silver hake (1176 otoliths, 73.2% of all otoliths); it occurred in 11 of the 13 net-caught dolphins. The second most abundant prey was haddock (120 otoliths but occurring in only 3 stomachs); third ranked was red hake (65 otoliths from 10 stomachs). In addition to the otoliths, there were 217 hagfish tooth sets (from at least 55 individuals). There were 109 squid beaks from seven stomachs. Surprisingly, also present was the benthic octopus *Bathypolypus bairdii* (348 beaks from 10 of the net-caught dolphins). Noteworthy was the presence of four open-ocean fishes known to be very rare in the Gulf of Maine – the rattail *Nezumia bairdii* and three lanternfishes: glacier lanternfish *Benthosema glaciale*, horned lanternfish *C. maderensis*, and Dumeril's lanternfish *Diaphus dumerilii*.

The otoliths from the stranded animals were mostly too digested to be identified. However, the only smelts (*Osmerus mordax*) identified from the white-sided dolphins were from these stomachs.

Pantropical spotted dolphin (*Stenella attenuata*) and **Atlantic spotted dolphin** (*Stenella frontalis*) (Table 7; Figure 3)

Both species of spotted dolphins were caught in relatively deep water off the continental shelf. Their stomach contents were similar to each other and superficially similar to the stomach contents of the common dolphin.

The two Pantropical spotted dolphins were taken off Cape Hatteras; they contained 3623 otoliths of about ten fishes. Two of the Atlantic spotted dolphins were taken south of Georges Bank in the same net haul; the remaining 12 were captured off Cape Hatteras. The 14 stomachs contained 15833 otoliths of at least 20 species of mostly small midwater fishes. In addition, there were ethmoverms of five snipe eels.

The stomach contents of both species of spotted dolphins were dominated by the horned lanternfish – 2991 and 11760 otoliths (82.6% and 74.3% of all otoliths), respectively. The *S. attenuata* had eaten four

species of lanternfishes (3255 otoliths); *S. frontalis* had eaten nine lanternfish species. The median size of these fishes in the dolphin stomachs is between 55 and 65 mm length.

Beluga (*Delphinapterus leucas* aka 'Poco'), **minke whale** (*Balaenoptera acutorostrata*), **longfinned pilot whale** (*Globicephala melas*), **humpback whale** (*Megaptera novaeangliae*), and **Sowerby's beaked whale** (*Mesoplodon bidens*) (Table 8).

The stomachs of these five whales were all from stranded animals; as is often the case, little was left in the stomach that is identifiable.

Discussion

Where do we stand now?

In the last three years we have spent most of our energy opening stomachs and identifying contents rather than analyzing data. Fishes are for the most part identified. Squids are not. Brett Hayward has expressed an interest in learning and identifying squids from seal and especially cetacean stomachs. This would be an important contribution to understanding of the ecology of marine mammals in the western North Atlantic.

Certain species are better covered than others. The following, species by species, are potential publishable papers resulting from this study:

Harbor seal

We will eventually combine our results with those of Amy Williams (van Atten). Both sets of data should be analyzed with respect to pups (those young-of-the-year individuals less than 107cm). Our data set contains 87 stomachs of pups. Amy's set contains about 53 pups. Amy's data are from seals spatially and seasonally more separated than ours. Many are, like ours, from the area between Cape Ann and Jeffrey's Ledge. Both sets are from the same sink gillnet fishery. Together they would make a significant contribution to knowledge about the harbor seal population off New England.

Common dolphin

The 11 stomachs analyzed in the last three years bring the total number of common dolphin stomachs in our database to 142, 132 of them coming from the continental shelf break or beyond on the continental slope from Cape Hatteras in the south (18 stomachs) to the canyons south of New England (110 stomachs).

We propose initially to analyze the data set of common dolphins from the shelf break outward and then to compare the other dolphins (*Stenella attenuata* and *S. frontalis*) and the Sowerby's beaked whales (*Mesoplodon bidens*) with the *D. delphis*. In the freezer there are probably no more *Delphinus* from off Cape Hatteras, but there are many more (hundreds) from the canyons south of George's Bank. Additional *D. delphis* stomachs from off Cape Hatteras would be important in order to compare spatial and seasonal differences between these two regions. Also, there may be stomachs of specimens from Cape Cod Bay. It is possible that stomachs of other drift gillnet caught dolphin species from the canyons south of George's Bank may be in the freezer, for example: bottlenose dolphin *Tursiops truncatus*, white-beaked dolphin *Lagenorhynchus albirostris*, and striped dolphin *Stenella coeruleoalba*. Any would be useful additions in studying the ecology of the area.

At the suggestion of Gordon Waring, we "timed" ourselves processing a *Delphinus delphis* stomach, in particular, #D01979, a 196cm dolphin caught in a drift gillnet, in March 1992, on the continental slope off North Carolina, at a depth of 503m. The stomach was weighed full, thawed, and its parts separated (main from fore; -- pyloric stomach was missing: it often can contain hundreds of tiny lenses, squid beaks and very eroded otoliths). The empty forestomach weighed 759g; its contents weighed 705g. As usual the main stomach was empty. It weighed 304g. We sieved the contents and got them soaking overnight in clean fresh water. There were no non-trace fishes or squids, which would have been separated here; there were two *Peprilus* skulls from which otoliths were removed. This took 4.5 hrs (three people working 1.5 hrs each).

The next day we rinsed the contents to remove any remaining muscle, taking great care not to lose nematodes and any other buoyant animals or parts of animals (other worms, crustaceans, tiny squid beaks) and began sorting. Initially we separated fish bones, including otoliths, from the invertebrates. We then separated the bones from the otoliths and allowed them to dry overnight. We separated the squid beaks and buccal masses from the crustaceans. The crustaceans and squid parts were preserved in 70% ethanol. This took another 10.5 hrs.

The next day we separated shrimp eyes from the other crustacean parts, separated otoliths by species, and removed squid beaks from buccal masses separating uppers from lowers. This took 11.5 hrs.

The crustaceans were identified as sergestids (probably *Sergestes* spp.) based on a combination of characters – eyes, rostra, and thoracic legs. The best character for counting is the eye, and we counted 249 pairs of eyes. We then identified and counted the otoliths – 1575 from at least eight species. The three most abundant species were 1324 *Ceratoscopelus maderensis*, 130 *Peprilus triacanthus*, and 30 *Diaphus dumerilii*. To estimate prey size we measured 40 *C. maderensis* otoliths. Mean otolith length was 3.095mm; mean fish length was 63.3mm; mean fish weight was 2.83g. Total mass of *C. maderensis* in this stomach originally would have been 3.75kg. Fish bones weighed 49.9g. There were 504 squid beaks. Of those 504 only 12 were from 6 buccal masses. There were 1260 fish lenses, 720 squid lenses, and only 4 nematodes. By the time all these prey items were sorted, identified, counted, and archived, we had spent a total of 41 person-hours.

As luck would have it # D01979 was fairly typical. The dolphin was 196cm in length vs. an average of 192.2cm for 118 *Delphinus* of known length examined from the continental slope. The stomach contained 1575 otoliths vs. an average of 1609.5 otoliths from the 92 reliable *Delphinus* with identifiable food.

A 'typical' seal stomach could be done in a day. Thawing, weighing (only one stomach compartment vs. three or more in a cetacean), separating and identifying (an average of 37.6 otoliths/stomach; 0.8 squid beaks/stomach) goes much faster than a dolphin. Seals swallow more prey whole, while dolphins tend to "bite" food. Small prey are mascerated; larger prey are bitten into two or three pieces.

White-sided dolphin

White-sided dolphins are known to occur, at least seasonally, on the outer continental shelf and slope. None of our specimens, however, came from outside the Gulf of Maine. Unfortunately direct comparison with the *Delphinus* is not possible.

Our 13 stomachs from the deeper water within the Gulf of Maine may seem insignificant, but as far as we can tell very few actual stomach contents have previously been analyzed from *L. acutus* in the

western Atlantic. Katona et al. (Fish. Bull. 76:475-6. 1978) reported on a single specimen, probably killed by a drift net near Jeffrey's Ledge, and Schevill (J. Mammal. 37:128-9. 1956) again reported on a single *L. acutus* killed east of Cape Cod. Both dolphins had eaten herring and squid. What is otherwise known about the food of white-sides in the western North Atlantic, is either from strandings or from observations of schooling dolphins feeding on what was thought to be herring, mackerel and/or sand lance.

If additional stomachs are not forthcoming soon, we would publish what data we presently have. The occurrence of the benthic octopod, *Bathypolypus bairdii*, in ten of the stomachs is very exciting in itself. Two other prey species, *Enchelyopus* and *Nezumia*, were probably also eaten near the bottom. The demersal species (*Merluccius*, *Melanogrammus*, *Urophycis*) may have been eaten near the bottom, but not on the bottom.

In addition to benthic feeding, we believe that the *L. acutus* may be feeding alongside otter trawls in the same way that they feed with the large baleen whales. Katona (in Katona et al. 1978) and others have observed *L. acutus* swimming with and apparently feeding with both finback (*Balaenoptera physalus*) and humpback (*Megaptera novaeangliae*) whales. As an otter trawl comes back to the ship, fishes may spill out of the wings of the net in a way similar to the way that fishes spill out of the mouth as a feeding whale comes to the surface. All of our specimens were from otter trawls and not gillnets. Thus, surface net-feeding behavior could be verified by observers and/or ship's crews on trawlers.

Pantropical spotted dolphin and Atlantic spotted dolphin

Both species of *Stenella* are directly comparable with *Delphinus*. All were caught with drift gillnets on the continental slope. Both *S. attenuata* and twelve of the 14 *S. frontalis* are from off Cape Hatteras. Eighteen *Delphinus* are from almost exactly the same area. Two of the *S. frontalis* are from the canyons south of George's Bank. Since the drift gillnet fishery is now closed we unfortunately will be unable to obtain any more *Stenella* stomachs from north of Cape Hatteras.

Like *Delphinus*, both species of *Stenella* consumed a lot of lanternfishes, primarily *C. maderensis*. An important difference between the two *Stenella* and *Delphinus* is the greater incidence in the stenellas of larger midwater fishes, the notosuidid *Scopelosaurus* spp. (175 to 200 mm) and the snake mackerel *Neolotus tripes* (200 to 300) mm). *Scopelosaurus* occurred in both *S. attenuata* and in eight of the 14 *S. frontalis*. *Neolotus* occurred in both *S. attenuata* and in 11 of the 14 *S. frontalis*.

Someone from the Southeast Center (perhaps Nelio Barros) may have stomachs from the spotted dolphins of the tropical Atlantic, Caribbean Sea and the Gulf of Mexico. If so, comparison with our results would be very interesting. *C. maderensis* does not occur south of Cape Hatteras.

Sowerby's Beaked Whale

During this study we examined a single *Mesoplodon bidens* stranded at Kennebunk, Maine, unfortunately with an empty stomach. Previously we had examined eleven by-caught *M. bidens*. Eight of them contained identifiable prey, and three presumed calves contained only mucus or milk. Fish remains were present in all eight stomachs containing prey. These included 35 taxa in 16 families of deep-living fishes. Five species (*Laemonema barbatula*, a morid; *Nezumia bairdii*, a macrourid; and *Lobianchia gemellarii*, *Lampanyctus crocodilus/festivus*, and *Lampadena speculigera*, all myctophids) occurred in all stomachs with contents. These species represented 67% of the otoliths found in the stomachs. Squids occurred in seven of the eight stomachs but represented only 1% of all prey items.

The stomach contents of the eight *M. bidens* are to be compared with 31 *D. delphis* also by-caught in the pelagic drift gillnet fishery south of Georges Bank in the summer. While both species occur together during the summer and autumn over the continental slope, in depths of 500-1500m, they have differing feeding strategies. Our *Delphinus* consumed mostly small, vertically migrating midwater fishes at their daytime depths of 400-500m. About 90% of the fishes eaten were myctophids between 50 and 70mm standard length. The *M. bidens* consumed a more diverse non-migratory benthopelagic diet of larger fishes (100-250mm), primarily morids (39.1%), myctophids (22.0%), macrourids (14.9%), and phycids (7.3%). The myctophids in *M. bidens* stomachs (*L. gemellarii*, *L. crocodilus/festivus*, *L. specularia*) were twice the size of the myctophids in *Delphinus* stomachs (*C. maderensis*, *Hygophum hygomii*). In *Delphinus*, squids occurred in 26 of 31 stomachs and represented about 4% of the prey items found.

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Table 1. Fish species (listed alphabetically) found in the stomachs of four seal species, with total numbers of otoliths (and the number of occurrences) in each seal species. Unidentified otoliths are not included.

Scientific Name	Common Name	Family	<i>C. cristata</i>	<i>H. grypus</i>	<i>P. groenlandica</i>	<i>P. vitulina</i>
Number of Stomachs			1	6	1	101
<i>Alosa pseudoharengus</i>	Alewife	Clupeidae		2 (1)		14 (3)
<i>Alosa aestivalis</i>	Blueback Herring	Clupeidae				14 (3)
<i>Alosa sapidissima</i>	American Shad	Clupeidae				14 (3)
<i>Ammodytes dubius</i>	Northern Sand Lance	Ammodytidae		27 (1)		
<i>Clupea harengus</i>	Atlantic Herring	Clupeidae	9 (1)	2 (1)		66 (12)
<i>Enchelyopus cimbrius</i>	Fourbeard Rockling	Gadidae				39 (13)
<i>Etropus microstomus</i>	Smallmouth Flounder	Paralichthyidae				111 (2)
<i>Gadus morhua</i>	Atlantic Cod	Gadidae		2 (1)	3 (1)	78 (15)
<i>Hippoglossoides platessoides</i>	American Plaice	Pleuronectidae				12 (6)
<i>Hippoglossus hippoglossus</i>	Atlantic Halibut	Pleuronectidae		7 (2)		
<i>Limanda ferruginea</i>	Yellowtail Flounder	Pleuronectidae		2 (1)		2 (1)
<i>Lumpenus lumpretaeformis</i>	Snakeblenny	Stichaeidae				43 (8)
<i>Melanogrammus aeglefinus</i>	Haddock	Gadidae				12 (6)
<i>Menidia menidia</i>	Atlantic Silverside	Atherinidae		2 (1)		169 (1)
<i>Merluccius bilinearis</i>	Silver Hake	Merlucciidae	6 (1)	7 (3)	6 (1)	2412 (84)
<i>Pepilus triacanthus</i>	Butterfish	Stromateidae	2 (1)			7 (2)
<i>Pollachius virens</i>	Pollock	Gadidae				69 (12)
<i>Scomber scombrus</i>	Atlantic Mackerel	Scombridae	18 (1)			4 (2)
<i>Sebastes fasciatus</i>	Acadian Redfish	Scorpaenidae		22 (1)		353 (21)
<i>Tautoglabrus adspersus</i>	Cunner	Labridae				36 (15)
<i>Urophycis chuss/tenuis</i>	Red/White Hake	Phycidae	21 (1)	11 (4)	6 (1)	285 (42)
<i>Zoarces americanus</i>	Ocean Pout	Zoarcidae				4 (3)

Table 2. Fish species (listed alphabetically) found in the stomachs of four dolphin species, with total numbers of otoliths (and the number of occurrences) in each dolphin species. Unidentified otoliths are not included.

Scientific Name	Common Name	Family	<i>D. delphis</i>	<i>L. acutus</i>	<i>S. attenuata</i>	<i>S. frontalis</i>
Number of Stomachs			19	11	2	14
<i>Alosa pseudoharengus</i>	Alewife	Clupeidae	3 (1)	2 (1)		
<i>Arctozenus rissoi</i>	White Barracudina	Paralepdidae	4 (2)			3 (1)
<i>Bathylagus</i> sp.	Deepsea Smelt	Bathylagidae				10 (2)
<i>Benthoosema glaciale</i>	Glacier Lanternfish	Myctophidae	97 (3)	10 (2)	33 (2)	39 (5)
<i>Bregmaceros</i> sp.	Codlet	Bregmacerotidae			2 (1)	4 (2)
<i>Ceratoscopelus maderensis</i>	Horned Lanternfish	Myctophidae	6220 (5)	1 (1)	2991 (2)	11760 (14)
<i>Chlorophthalmus agassizi</i>	Shortnose Greeneye	Chlorophthalmidae	2 (1)			
<i>Clupea harengus</i>	Atlantic Herring	Clupeidae		21 (3)		1 (1)
<i>Diaphus dumerilii</i>	Dumeril's Headlightfish	Myctophidae	40 (3)	1 (1)	227 (1)	163 (4)
<i>Enchelyopus cimbrius</i>	Fourbeard Rockling	Gadidae		20 (2)		
<i>Gadella imberbis</i>	Beardless Codling	Moridae	5 (1)			
<i>Hygophum hygomii</i>	Captain Hygom's Lanternfish	Myctophidae	239 (3)			570 (7)
<i>Lampanyctus</i> sp.	Lanternfish	Myctophidae				1 (1)
<i>Lestrolepis intermedia</i>	Barracudina	Paralepdidae	6 (1)		2 (1)	7 (3)
<i>Lobianchia dofleini</i>	Doflein's False Headlightfish	Myctophidae	7 (1)		2 (1)	92 (6)
<i>Maurolicus weitzmani</i>	Weitzman's Pearlsides	Sternoptychidae	8 (1)	2 (2)		6 (1)
<i>Melanogrammus aeglefinus</i>	Haddock	Gadidae	2 (1)	120 (3)		
<i>Merluccius bilinearis</i>	Silver Hake	Merlucciidae	12 (2)	1176 (11)		
<i>Myctophum</i> spp.	Lanternfish	Myctophidae				7 (3)
<i>Myxine glutinosa</i> (teeth)	Atlantic Hagfish	Myxinidae		217 (7)		
<i>Neolotus tripes</i>	Black Snake Mackerel	Gempylidae	4 (1)		11 (2)	160 (11)
<i>Nemichthys scolopaceus</i> (jaws)	Slender Snipe Eel	Nemichthyidae	23 (2)			5 (2)
<i>Nezumia bairdii</i>	Marlin-spike	Macrouridae		6 (1)		
<i>Notoscopelus resplendens</i>	Patchwork Lampfish	Myctophidae	41 (1)		2 (1)	541 (6)
<i>Ophidion marginatum</i>	Striped Cusk-eel	Ophidiidae	1 (1)			
<i>Osmerus mordax</i>	Rainbow Smelt	Osmeridae		16 (1)		
<i>Peprilus triacanthus</i>	Butterfish	Stromateidae	130 (1)		7 (2)	70 (3)
<i>Pterycombus brama</i>	Pomfret	Bramidae				165 (1)
<i>Scomber scombrus</i>	Atlantic Mackerel	Scombridae	18 (2)			2 (1)
<i>Scopelosaurus smithi</i>	Smith's Waryfish	Notosudidae	1 (1)		14 (2)	292 (8)
<i>Symbolophorus veranyi</i>	Largescale Lanternfish	Myctophidae	5 (1)			21 (4)
<i>Urophycis chesteri</i>	Longfin Hake	Phycidae	4 (1)			
<i>Urophycis chuss</i>	Red Hake	Phycidae	4 (1)	59 (8)		
<i>Urophycis tenuis</i>	White Hake	Phycidae		6 (2)		
<i>Vinceguerria</i> spp.	Lightfish	Phosichthyidae	23 (1)			

Table 3. Collection data and stomach contents of 101 by-caught harbor seals (*Phoca vitulina*).

Tag #	Trip ID	Fishery Type	Year	Month	Day	Lat	Lon	Depth (m)	Sex	Length (cm)	Reliable?	Empty (g)	Contents (g)
D01100	A52038, Haul #3	anchored sink gillnet	1998	8	4	42 19 12	70 40 32	48	F	82.5	y	196.5	84
D01464	A67090L, Haul #1	anchored sink gillnet	1995	10	17	42 51 34	70 19 55	58	M	95	y	263	1553
D03291	C99017C, Haul #1	anchored sink gillnet	2004	7	5	42 53 11	70 35 17	82	M	109	N/A	143	442
D03933	D83001, Haul #3	drift sink gillnet	2004	10	6	42 58 47	70 23 54	106	M	106	y	322	418
D03943	C70021C, Haul #4	anchored sink gillnet	2004	7	22	42 42 54	70 28 26	75	M	103	y	180	84
D04233	B49007L, Haul #3	anchored sink gillnet	2000	8	8	43 04 53	70 28 11	N/A	F	N/A	n	181.7	5.4
D04234	B14031L, Haul #3	anchored sink gillnet	1999	7	19	42 56 09	70 31 51	82	M	84	y	134	316.5
D05015	C61012L, Haul #1	drift sink gillnet	2003	9	24	43 10 10	70 20 54	48	M	96	y	321	557
D05016	C61012L, Haul #2	drift sink gillnet	2003	9	24	43 09 11	70 19 40	55	M	91	y	246	330
D05017	C61012L, Haul #4	drift sink gillnet	2003	9	24	43 07 31	70 19 02	58	F	91	y	258	687
D05137	D41032, Haul #2	anchored sink gillnet	2004	12	22	41 40 18	69 44 12	60	F	102	y	291	874
D05139	B54009, Haul #8	bottom otter trawl	2000	5	30	43 35 30	69 36 30	143	M	N/A	n	153.5	31.5
D05176	D31001C, Haul #2	anchored sink gillnet	2004	7	3	42 31 19	70 41 22	N/A	N/A	81	y	113	56
D05177	D31003C, Haul #2	anchored sink gillnet	2004	7	17	42 48 29	70 17 27	55	N/A	89	N/A	71	51
D05178	D31004C, Haul #2	drift sink gillnet	2004	7	22	42 52 17	70 34 50	66	M	85	y	171	96
D05180	D31006C, Haul #2	drift sink gillnet	2004	7	30	42 55 07	70 23 44	97	M	94	y	188	182
D05184	D31009C, Haul #1	drift sink gillnet	2004	8	4	43 06 58	70 21 12	101	M	91	y	234	228
D05185	D31009C, Haul #2	drift sink gillnet	2004	8	4	43 05 01	70 22 13	80	F	89	y	171	17
D05188	A03007C, Haul #6	anchored sink gillnet	2003	3	28	40 37 00	70 49 02	36	M	113	y	315	565
D05227	B62025, Haul #2	anchored sink gillnet	2000	6	25	42 54 51	70 35 40	73	M	82	y	91.8	88.2
D05246	D40008, Haul #2	otter trawl	2005	3	23	42 26 00	70 20 00	64	F	90	n	331	195
D05254	B63092, Haul #1	anchored sink gillnet	2002	7	27	42 53 32	70 38 42	59	N/A	86	n	214	800
D05255	B63091L, Haul #2	drift sink gillnet	2002	7	26	42 55 18	70 34 40	69	M	100	n	180	390.2
D05260	B63071C, Haul #2	drift sink gillnet	2003	7	13	42 55 53	70 31 46	N/A	N/A	79	n	126	256
D05261	B63074C, Haul #4	anchored sink gillnet	2003	7	16	42 42 56	70 13 47	99	M	89	n	139	279
D05317	D28003C, Haul #3	anchored sink gillnet	2004	7	15	42 50 42	70 37 42	68	F	62	y	184	722
D05319	D28017C, Haul #1	anchored sink gillnet	2004	8	30	43 20 12	70 13 31	77	N/A	105	y	385	1609
D05321	D28024C, Haul #3	drift sink gillnet	2004	9	20	42 53 59	70 26 49	86	M	93	N/A	261	520
D05476	B55006, Haul #2	anchored sink gillnet	2002	2	22	42 33 32	70 39 06	43	M	95	N/A	458.9	56.3
D05479	B99004L, Haul #3	anchored sink gillnet	2002	6	26	42 26 36	70 28 48	51	N/A	101	n	151.3	110.5
D05480	B99007, Haul #1	anchored sink gillnet	2002	7	15	42 28 57	70 33 19	59	M	102	y	182.8	440.2
D05542	C05008, Haul #17	bottom otter trawl	2002	8	5	43 24 42	70 05 36	63	M	76	y	113	16
D05543	C05008, Haul #17	bottom otter trawl	2002	8	5	43 24 42	70 05 36	63	N/A	N/A	n	193	698
D05544	C05030C, Haul #1	anchored sink gillnet	2003	9	9	42 53 31	70 38 13	36	N/A	85	y	146	206
D05563	D45002C, Haul #1	anchored sink gillnet	2004	8	23	43 19 56	70 14 02	75	N/A	97	N/A	226	575
D05564	D45002C, Haul #3	anchored sink gillnet	2004	8	23	43 24 11	70 05 44	88	N/A	100	y	294	1021
D05632	D46006C, Haul #1	anchored sink gillnet	2004	9	21	43 20 35	70 13 06	88	F	94	y	265	37
D05633	D46006C, Haul #2	anchored sink gillnet	2004	9	21	43 20 16	70 12 38	80	N/A	104	y	275	232
D05634	D46006C, Haul #2	anchored sink gillnet	2004	9	21	43 20 16	70 12 38	80	N/A	91	y	210	253
D05713	B49003, Haul #5	anchored sink gillnet	2002	10	5	42 32 00	70 36 35	71	N/A	102	y	259.5	356.7
D05714	B49004L, Haul #5	anchored sink gillnet	2002	10	7	42 42 41	70 25 14	71	M	102	y	237.8	1418.2
D05751	B69048L, Haul #5	drift sink gillnet	2001	7	25	43 01 00	70 28 52	91	N/A	N/A	y	176.5	593.5
D05754	B69048L, Haul #7	drift sink gillnet	2001	7	25	43 02 26	70 28 36	88	N/A	N/A	y	215.5	209.9
D05756	B69048L, Haul #7	drift sink gillnet	2001	7	25	43 02 26	70 28 36	88	N/A	N/A	y	165	261.3
D05766	B69036L, Haul #1	drift sink gillnet	2001	7	5	42 53 42	70 42 04	21	M	89	y	247	1382
D05767	B69038L, Haul #1	anchored sink gillnet	2001	7	7	42 51 41	70 33 22	44	M	86.5	y	135	74
D05772	B69010L, Haul #2	anchored sink gillnet	2000	11	14	42 52 40	70 29 52	78	M	109	n	345	639
D05773	B69010L, Haul #2	anchored sink gillnet	2000	11	17	42 52 40	70 29 52	78	M	95	y	314	543
D05876	B68050L, Haul #1	anchored sink gillnet	2001	7	26	42 27 00	70 18 48	75	N/A	90	y	190	34.7
D06051	B13088, Haul #4	anchored sink gillnet	1997	11	18	42 32 49	70 12 18	96	M	104	y	355.1	58.2
D06152	C69001C, Haul #3	anchored sink gillnet	2003	12	23	42 12 54	70 31 48	27	F	109	y	341	476
D06263	B14062L, Haul #1	anchored sink gillnet	1998	6	25	42 55 06	70 22 37	78	F	77	N/A	145.3	4.3
D06271	B36002C, Haul #4	anchored sink gillnet	1998	10	8	42 53 09	70 30 46	58	F	89	y	318	819
D06275	B14003L, Haul #4	anchored sink gillnet	1999	2	1	41 04 06	71 27 07	34	F	88	y	301	285
D06401	B14043L, Haul #4	anchored sink gillnet	1999	8	6	42 56 25	70 34 34	35.5	M	77	y	148	244
D06402	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	28.5	F	78	y	202	450
D06403	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	28.5	F	77	y	184	195
D06404	B14032L, Haul #4	anchored sink gillnet	1999	7	20	42 58 54	70 31 48	42.5	M	85	y	140	528
D06405	B14032L, Haul #4	anchored sink gillnet	1999	7	20	42 58 54	70 31 48	42.5	M	80	y	161	127
D06406	B14032L, Haul #4	anchored sink gillnet	1999	7	20	42 58 54	70 31 48	42.5	M	81	y	90	0
D06407	B14032L, Haul #4	anchored sink gillnet	1999	7	20	42 58 54	70 31 48	42.5	F	78	y	81	231
D06408	B14033L, Haul #3	anchored sink gillnet	1999	7	21	43 00 30	70 32 27	67	F	92	y	196	727
D06409	B14033L, Haul #3	anchored sink gillnet	1999	7	21	43 00 30	70 32 27	67	M	83	y	168	105
D06410	B14033L, Haul #4	anchored sink gillnet	1999	7	21	43 00 41	70 32 37	68	F	85	y	235.5	643.5
D06411	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	28.5	M	86	y	235	321
D06412	B14040L, Haul #4	anchored sink gillnet	1999	7	31	42 57 54	70 33 33	41	F	72	y	232	448
D06413	B14040L, Haul #2	anchored sink gillnet	1999	7	31	42 57 37	70 29 34	49	F	78	y	238	613
D06414	B14037L, Haul #1	anchored sink gillnet	1999	7	27	42 59 21	70 30 58	45.5	F	81	y	192	320
D06415	B14033L, Haul #4	anchored sink gillnet	1999	7	21	43 00 41	70 32 37	37	F	87	y	110	473
D06416	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	91	M	90	y	206.4	619.2
D06417	B14030C, Haul #6	anchored sink gillnet	1999	7	18	42 53 48	70 32 54	47	M	83	y	136	682
D06418	B14030C, Haul #6	anchored sink gillnet	1999	7	18	42 53 48	70 32 54	47	M	87	y	196	142
D06419	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	91	M	91	y	175.5	308.5
D06420	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	50	M	84	y	213	370
D06421	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	50	F	83	y	130	542
D06422	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	91	M	87	y	179	518.3
D06424	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	91	F	79	y	164.4	165
D06425	B14031L, Haul #1	anchored sink gillnet	1999	7	19	43 00 26	70 30 32	91	F	78	y	169	220.6
D06461	D35002C, Haul #4	anchored sink gillnet	2004	7	8	42 57 59	70 26 38	80	M	106	y	195	520
D06462	D35007C, Haul #3	anchored sink gillnet	2004	8	10	42 53 19	70 31 50	88	M	110	y	229	611
D06501	B14033L, Haul #3	anchored sink gillnet	1999	7	24	42 56 33	70 31 25	47.5	F	72	y	191	40
D06504	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	55	M	86	y	170.5	186.5
D06505	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	55	N/A	84	y	242.5	185.7
D06506	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	55	M	84	y	214.5	580.7
D06508	B14044L, Haul #4	anchored sink gillnet	1999	8	7	42 55 58	70 37 06	55	F	87	y	237.8	333.8
D06511	B14045L, Haul #5	anchored sink gillnet	1999	8	10	42 56 32	70 31 15	87	F	82	y	198.6	168.2
D06512	B14047L, Haul #2	anchored sink gillnet	1999	8	12	43 05 51	70 23 46	84	F	83	y	213.7	175.1
D06513	B14047L, Haul #2	anchored sink gillnet	1999	8	12	43 05 51	70 23 46	84	F	85	y	230.1	77.6
D06514	B14047L, Haul #3	anchored sink gillnet	1999	8	12	43 04 47	70 24 12	51	F	83	y	236	68
D06515	B14048L, Haul #1	anchored sink gillnet	1999	8	13	42 54 49	70 31 08	42	M	83	y	206	740
D06516	B14049L, Haul #4	anchored sink gillnet	1999	8	16	42 54 09	70 30 14	97	M	83	y	198.3	1024.7
D06940	B98001, Haul #2	anchored sink gillnet	2002	7	2	42 24 43	70 40 28	66	F	92	y	102.6	84.7
D06941	B98003, Haul #2	bottom otter trawl	2002										

Table 3 continued. Collection data and stomach contents of 101 by-caught harbor seals (*Phoca vitulina*).

Tag #	Bones (g)	# Otoliths	Alosa	Clupea	Enchelyopus	Etropus	Gadus	Hippoglossoides	Limanda	Lumpenus	Melanogrammus	Menidia	Merluccius
D01100	2.8	9											2
D01464	33	44		15									29
D03291	15.7	58			4		2						15
D03933	6.7	28											26
D03943	2.3	14	1				2						5
D04233		2											2
D04234	3.3	22									2		20
D05015	14.9	28											26
D05016	13.1	57											36
D05017	32	74											
D05137	16.7	24	4	9			2						2
D05139	4	16							3				2
D05176	1.5	18			2		6	1	2	2			2
D05177	1	4											2
D05178	1.8	92											
D05180	2.1	57						2					53
D05184	2.2	63											62
D05185		13											11
D05188	23.8	115				109							4
D05227	2.9	6											4
D05246	7.3	15					12						
D05254	16.5	73											73
D05255	12.2	31											19
D05260	6.9	44											34
D05261	14	214									2		204
D05317	7.6	30							2				26
D05319	37.1	134											129
D05321	7.9	20					1						19
D05476	0.4	12											
D05479	4	9											5
D05480	11.6	39			1								31
D05542													
D05543	16.6	24											22
D05544	11.8	50							5				24
D05563	11.7	140											118
D05564	18.2	56											56
D05632	0.9	8			2								6
D05633	7.4	25											24
D05634	6.9	8											2
D05713	<1	6											6
D05714	25.3	47		2									22
D05751	16.9	43											33
D05754	3.3	40											38
D05756	12.2	21				3							10
D05766	36.1	124											124
D05767	3.4	37					2			4			18
D05772	17	51											25
D05773	10.1	10		10									
D05876													
D06051	<0.1	3											2
D06152	10.5	15					2						9
D06263													
D06271	17.4	22		2									20
D06275	10.3	3					1						
D06401	8.5	23		1									22
D06402	18.8	73			2								39
D06403	4.1	6											5
D06404	5.2	42	2	1									39
D06405	2.4	36	2										34
D06406													
D06407	5.7	18							18				
D06408	12	35											17
D06409	4.7	23											14
D06410	12.8	57											55
D06411	8.5	39											39
D06412	9.5	33											23
D06413	13.2	44					2						38
D06414	10	25			2		4			2			8
D06415	5.1	22			7			2		4			2
D06416	7.3	38	2										24
D06417	10.3	44						2		6			26
D06418	3.3	17					4						8
D06419	9.6	36	6		1								25
D06420	3.7	15											12
D06421	11.9	52	4				2				2		28
D06422	16	65											65
D06424	8.2	32											5
D06425	7.3	24			2								12
D06461	13.3	40					34				2		2
D06462	12.4	96			2								94
D06501	0.6	21											21
D06504	4.1	13											12
D06505	2.3	16											14
D06506	14.6	35		2									33
D06508	10.7	128											124
D06511	9.8	25											
D06512	3.3	9		2									7
D06513	2.2	2											2
D06514	0.6	13						2					11
D06515	26.4	65											54
D06516	48	54											2
D06940	2.7	6			2								
D06941	3.3	33			9						2		13
D06942	21.7	56	11	9							2		28
D06976	5.8	22					2						7
D06977	10.3	41		2									38
D06978	4.7	20											2
D06979	5.9	8											
D06984	2.5	191	10			2						169	8
D08726	19.2	11		11									
D0A4430													
		3802	42	66	39	111	78	12	2	43	12	169	2412

Table 3 continued. Collection data and stomach contents of 101 by-caught harbor seals (*Phoca vitulina*).

Tag #	Peprilus	Pollachius	Scomber	Sebastes	Tautoglabrus	Urophycis	Zoarces	Zoarcid	flatfish	Unidentified	Unidentifiable	# lenses
D01100						7						5
D01464												29
D03291		10		17	2	5		2	1			42
D03933						2						11
D03943				4							2	8
D04233												
D04234												12
D05015						2						13
D05016				21								18
D05017				74								65
D05137	5		2									21
D05139						1					10	10
D05176				2	2					1		
D05177	2											1
D05178				92								51
D05180				2								25
D05184										1		15
D05185				2								2
D05188						2						45
D05227										2		4
D05246				2					1			5
D05254												29
D05255		2				10						13
D05260					2	6		2				33
D05261		4		4								143
D05317									2			13
D05319											5	60
D05321												13
D05476		8								4		
D05479				4								4
D05480						7						22
D05542												
D05543						2						14
D05544				6	6	9						14
D05563						22						36
D05564												51
D05632												3
D05633											1	12
D05634						2				2	2	5
D05713												3
D05714						23						24
D05751						8				2		22
D05754						2						16
D05756						8						18
D05766												62
D05767						13						11
D05772		26										22
D05773												9
D05876												
D06051						1						2
D06152			2			2						10
D06263												
D06271												9
D06275							2					2
D06401												10
D06402		2				29					1	43
D06403							1					1
D06404												26
D06405												12
D06406												
D06407												12
D06408		5				13						29
D06409					1	7					1	2
D06410		2										19
D06411												28
D06412				6		4						12
D06413						4						24
D06414					4	4		1				13
D06415						4			1		2	15
D06416		4			2	5					1	23
D06417						2		7			1	21
D06418					2	3						5
D06419						4						28
D06420						3						12
D06421				6		10						25
D06422												21
D06424		3		22	2							23
D06425				1	2	6				1		15
D06461						2						31
D06462												39
D06501												7
D06504						1						4
D06505				2								2
D06506												16
D06508							4					29
D06511				24		1						16
D06512												8
D06513												2
D06514												
D06515		2		7							2	29
D06516				52								68
D06940						4						2
D06941						9						17
D06942						6						15
D06976		1		3	5	4						12
D06977					1							27
D06978						17	1					10
D06979						8						6
D06984						2						73
D08726												7
D0A4430	7	69	4	353	36	285	4	12	5	15	26	1896

Table 3 continued. Collection data and stomach contents of 101 by-caught harbor seals (*Phoca vitulina*).

Tag #	# squid beaks	# nematodes	nematodes (g)	crustaceans	Comments
D01100		121	2.8		fish mush with 95mm vertebral section; 1 <i>Urophycis</i> skull
D01464		53	4.3		distended with 3 non-trace <i>Clupea</i> & trace fish (<i>Merluccius</i> & <i>Clupea</i>)
D03291		13	0.2		shells (brachiopods, bivalves, gastropods)
D03933		32	1		<i>Merluccius bilinearis</i> 205mm from back of skull
D03943		15	0.5		<i>Gadus morhua</i> ~120mm, ~30g
D04233		40	0.9		stomach contracted and almost empty
D04234		36	0.5		fully distended with fish, 1 non-trace <i>M. bilinearis</i> ; pyloric area with bones & otoliths
D05015		10	0.7		sieve-clogging fish paste; chunks and 1 skull of <i>M. bilinearis</i>
D05016		138	5.5		smelly; 4-5 fish bodies with crushed skulls (<i>Sebastes</i>); bones are mostly <i>Sebastes</i>
D05017		32	1.3		1 near non-trace <i>Sebastes</i> plus two other <i>Sebastes</i> skulls
D05137	2	233	10.2		fully distended; 3 non-trace (<i>P. triacanthus</i> 120mm); 2 <i>Alosa</i> (155mm, 165mm); 2 near non-trace <i>Clupea</i> ; 1 <i>M. bilinearis</i> skull
D05139		5	<0.1		gaping hole at upper end of stomach; contents smelly; a few very eroded otoliths
D05176		84	1.1		1 non-trace <i>Lumpenus</i> ; some nematodes attached to stomach wall, crustacean fragments Aorida? amphipod, 2 <i>Crangon</i>
D05177		2	<0.1		almost empty stomach, small cut in side
D05178		105	2.3		mucous; lots of worms; most bones were <i>Sebastes</i> ; 3 unidentified premaxillaries
D05180	20	80	1.5		4 <i>Loligo</i> ? bodies, one with head attached 120, 130, 140mm mantle lengths
D05184	18	17	0.1		3 whole <i>Loligo</i> , 130, 130, 140mm mantle lengths
D05185	10	59	0.9		no fish remains except for otoliths; very digested piece of squid mantle
D05188		526	8.1		fish mush, bones & otoliths; 4 <i>Eitropus</i> skulls
D05227		13	0.5		cunner bones, but no otoliths;
D05246		477	15.9		fish mush & large nematodes; 1 <i>Gadus</i> skull
D05254		15	0.3		3 non-trace <i>M. bilinearis</i> (213mm 88g, 230mm 106g, 270mm 156g) with roe
D05255		23	0.5		2 non-trace <i>M. bilinearis</i> (215mm 158.7g, 225mm 121g) with roe; <i>Tautoglabrus</i> (at least 3) jaw bones but no otoliths
D05260		354	8.5		one near non-trace <i>M. bilinearis</i>
D05261		10	<0.1	6	shrimp from fish stomachs
D05317		95	1.2		4 <i>M. bilinearis</i> : 1 whole (230mm, 104g), 3 complete vertebral columns 215, 220, 225mm
D05319		127	5.2		fully distended
D05321	1	16	0.9		2 non-trace <i>M. bilinearis</i> (200, 230mm); (64, 101g) plus pieces of two others
D05476		754	24		whelk operculum
D05479		67	1.1		two near non-trace <i>Sebastes</i> (120mm, 30.6g; 120mm, 33.4g); distended and full of fish
D05480		29	0.4		fully distended with fish, 4 <i>M. bilinearis</i> chunks (6-16cm) all headless; nothing non-trace
D05542		194	4		mucous; nothing solid; flabby nematodes (date and length don't agree with label)
D05543					smelly, fish mush; 4 vertebral sequences <i>M. bilinearis</i>
D05544		76	1.5		fish mush (bones and muscle); one almost non-trace <i>Tautoglabrus</i> ; <i>Lumpenus</i> skull
D05563	4	41	1.7		1 non-trace <i>Urophycis chuss</i> (280mm 138g)
D05564	5	28	1.3		fully distended with 11 near non-trace <i>M. bilinearis</i> and one near non-trace squid 150mm
D05632		20	0.3		almost empty stomach
D05633		4	0.2		<i>Merluccius</i> mush; ~ a dozen amphipods
D05634	1	221	4.8		<i>U. chuss</i> carcass, vertebral column (240cm) and partial skull; 1 <i>M. bilinearis</i> skull and 1 ?? skull
D05713	6	193	12.8		2 non-trace <i>M. bilinearis</i> (270mm, 176.5g; 195mm); 3 near non-trace squid (pen length: 88mm, 81mm, 62mm)
D05714		49	3.6		1 non-trace <i>Urophycis chuss</i> (360mm 353.3g); 1 near non-trace <i>Clupea harengus</i> (232mm); <i>M. bilinearis</i> skull
D05751		10	0.1		distended with headless bodies of 4 fish plus 3 skulls (1 <i>Urophycis</i> , 2 <i>M. bilinearis</i>)
D05754		41	0.4		1 non-trace <i>U. chuss</i> (297mm, 178.7g)
D05756		12	<0.1		small stomach distended, 1 <i>M. bilinearis</i> skull
D05766		29	0.6		full stomach; 4 non-trace <i>M. bilinearis</i> (230mm, 230mm, 235mm, 240mm)
D05767		75			contents mostly mush; 1 <i>Lumpenus</i> skull
D05772		156	9.7		3 <i>Pollachius</i> skulls; Note: 1st seal stomach examined.
D05773		47	2.7		fully distended with fish mush and bones
D05876		33	0.5		calf with mucous/milky contents
D06051	8	98	2		1 non-trace <i>Loligo</i> (95mm mantle length, 35.4g)
D06152		508	18.6		1 near non-trace <i>Gadus morhua</i> (skull with vertebral sections)
D06263		6	<0.1		empty stomach; mucous only
D06271		51	2.6		1 non-trace <i>Clupea</i> (195mm)
D06275		168	4.7		not fully distended; one headless fish; <i>E. parma</i> (23 whole & fragments) and 5pr. Cocker shells (from <i>Zoarces</i> stomach?)
D06401		1	<0.1		fish mush and bones; 1 large head <i>M. bilinearis</i> ; headless <i>Clupea</i>
D06402		25	0.8		fish mush; 1 <i>M. bilinearis</i> skull, 1 <i>Urophycis</i> skull; whelk operculum
D06403		201	4.7		fish mush; lots of nematodes; echinoid tests and bivalve shells (from <i>Zoarces</i> stomach?)
D06404		25	0.3		1 non-trace <i>Alosa</i> (200mm+); 1 non-trace <i>M. bilinearis</i> (260mm+)
D06405		12	0.1		fish mush except for 1 non-trace <i>Alosa</i> cf. <i>pseudoharengus</i> (133mm)
D06406		5	<0.1		calf with empty stomach
D06407		129	2.3		2 near non-trace <i>Lumpenus</i>
D06408		26	0.4		1 non-trace <i>M. bilinearis</i> (220mm, 80g) plus 1 skull; 2 <i>Urophycis</i> skulls; jaw bones but no otoliths of 1 <i>T. adpersus</i>
D06409		147	2.6		1 near non-trace <i>Urophycis</i> (chunks plus skull)
D06410		8	<0.1		fully distended with 4+ <i>M. bilinearis</i> , 1 non-trace (264mm, 178.5g), plus 3 skulls
D06411		44	1.7		fish mush
D06412		190	7		fully distended with fish chunks; 1 <i>U. chuss</i> skull and 1 <i>M. bilinearis</i> skull
D06413		103	3.2		1 non-trace <i>M. bilinearis</i> (245mm, 129+g) plus 1 skull
D06414		264	5.5		4 skulls: 1 <i>Tautoglabrus</i> , 1 <i>Lumpenus</i> , 2 <i>Gadus</i> ; 1 <i>Scomber</i> premax., but no otoliths
D06415					1 non-trace <i>U. chuss</i> (275mm, 180g); 4 skulls: 1 <i>M. bilinearis</i> , 1 <i>Hippoglossoides</i> , 2 <i>Lumpenus</i>
D06416		50	1.5		full; 2 near non-trace <i>M. bilinearis</i> (240mm, 268mm); 1 near non-trace <i>Alosa</i> (148mm)
D06417		24	0.5		full; 1 non-trace <i>M. bilinearis</i> (250mm, 132g); skulls of 3 zoarcids and 1 <i>Lumpenus</i>
D06418		48	0.6		not distended; 1 non-trace <i>T. adpersus</i> (117mm, 38g)
D06419		71	1.6		distended; nothing non-trace
D06420		93	2		nothing non-trace
D06421		20	<0.1		full; 1 non-trace <i>Alosa pseudoharengus</i> (133mm), 1 non-trace <i>M. bilinearis</i> (180mm) and 1 non-trace <i>U. chuss</i> (175mm)
D06422		21	0.4		fully distended; 1 large <i>M. bilinearis</i> in chunks; nothing non-trace
D06424		115	2.3		1 near non-trace <i>T. adpersus</i> (115mm)
D06425		310	6.7		distended with fish chunks; nothing non-trace; 1 <i>U. chuss</i> skull
D06461		233	5.3		fully distended, 1 <i>Melanogrammus aeglefinus</i> skull, 2 <i>G. morhua</i> / <i>Pollachius virens</i> skulls; no complete vertebral columns
D06462		120	3		1 non-trace <i>Enchelyopus cimbricus</i> (205mm, 31g); 3 <i>Merluccius</i> skull
D06501		116	2		almost empty stomach, little besides otoliths and nematodes
D06504		26	<0.1		not fully distended; 1 skull, muscle, and bones from <i>Merluccius</i> ; nothing but 1 otolith from <i>Tautoglabrus</i>
D06505		22	1.2		1 <i>M. bilinearis</i> , headless, 210mm; many <i>Sebastes</i> bones
D06506		21	<0.1		fully distended; 1 almost whole <i>Clupea</i> and 1 almost whole, plus 2 skulls of <i>M. bilinearis</i>
D06508		24	0.7		fully distended with fish mush, bones and few chunks of flesh; nothing non-trace but there were two <i>Merluccius</i> heads
D06511		151	4.9		1 near non-trace <i>T. adpersus</i> (160mm, without jaws)
D06512		218	7.6		1 near non-trace <i>M. bilinearis</i> (210mm, 62+g)
D06513		149	6.5		nothing non-trace
D06514	2	14	<0.1		1 <i>Hippoglossoides</i> skull with 2 otoliths; remaining contents few and highly digested
D06515	6	50	1		1 fully distended; mostly <i>Merluccius</i> parts including 2 skulls; 1 large non-trace shrimp
D06516		74	6.2		fully distended; 99% <i>Sebastes</i> , 1 non-trace (145mm, 74g)
D06940		12	<0.1		1 near non-trace <i>Urophycis</i> with roe (155mm)
D06941		68	1.1		nothing non-trace; 1 <i>Merluccius</i> skull
D06942		83	4.8		fully distended; 4 non-trace <i>Alosa</i> , 1 non-trace <i>Melanogrammus</i>
D06976		47	1.3		not full; nothing non-trace; 2 <i>Merluccius</i> skulls, 1 <i>U. chuss</i> skull
D06977		45	1.8		fully distended; nothing non-trace; 1 <i>Merluccius</i> skull
D06978		240	4.3		distended with 1 non-trace <i>Zoarces americanus</i> (220mm, 51.3g)
D06979		14	0.6		fully distended; 4 near non-trace <i>Urophycis</i> with skulls
D06984		38	1.8		31 near non-trace <i>Menidia</i> plus 6 <i>Menidia</i> skulls
D08726		58	2.7		fully distended with 6 near non-trace <i>Clupea harengus</i> (vertebral columns: 180, 190, 190, 190, 200, 230mm)
D0A4430					possible nursing pup; milky substance in stomach
	83	9396	273.7	7	

Table 4. Collection data and stomach contents of six gray seals (*Halichoerus grypus*), one hooded seal (*Crystophora cristata*), and one harp seal (*Pagophilus groenlandica*).

Species	Tag #	Trip ID	Fishery Type	Year	Month	Day	Lat	Lon	Depth (m)	Sex	Length (cm)	Reliable?	Full (g)	Empty (g)	Contents (g)	Bones (g)
<i>Halichoerus grypus</i>	D04482	C84003C, Haul #5	sink gillnet	2004	5	6	42 01 20	69 57 59	29	F	107	y	610	316	294	13.3
<i>Halichoerus grypus</i>	D05182	C41010L, Haul #1	sink gillnet	2003	4	15	40 08 12	70 01 18	117	M	118	y	676	455	221	10.1
<i>Halichoerus grypus</i>	D05189	A03007, Haul #6	anchored sink gillnet	2003	3	28	40 37 00	70 49 02	66	M	111	y	491	221	270	8.6
<i>Halichoerus grypus</i>	D05406	C94013C, Haul #1	sink gillnet	2004	8	6	41 36 11	64 46 23	13	M	127	y	609	479	130	3.5
<i>Halichoerus grypus</i>	D06151	A31030L, Haul #4	sink gillnet	2004	2	25	41 03 55	71 28 50	31	F	108	?	356	198	158	8.8
<i>Halichoerus grypus</i>	D06262	B14040C, Haul #1	sink gillnet	1998	5	21	42 53 44	70 34 32	77	N/A	N/A	y	1183	406	777	29.3
											114.2				1850	73.6
<i>Crystophora cristata</i>	D03281	C95011C, Haul#1	sink gillnet	2004	5	22	40 42 52	71 07 56	33	M	108	y	1601	345	1256	18.2
<i>Pagophilus groenlandica</i>	D05405	C59004, Haul #2	sink gillnet	2004	3	1	40 05 12	70 03 12	150	M	97	y	755	329	426	9

Table 4 continued. Collection data and stomach contents of six gray seals (*Halichoerus grypus*), one hooded seal (*Crystophora cristata*), and one harp seal (*Pagophilus groenlandica*).

Species	Tag #	# Otoliths	Alosa	Ammodytes	Clupea	Gadus	Hippoglossus	Limanda	Menidia	Merluccius	Peprilus	Scomber	Sebastes	Urophycis	flatfish	Unidentified	Unidentifiable
<i>Halichoerus grypus</i>	D04482	2				2											
<i>Halichoerus grypus</i>	D05182	13					5			4				4			
<i>Halichoerus grypus</i>	D05189	47												1	46		
<i>Halichoerus grypus</i>	D05406	29			27			2									
<i>Halichoerus grypus</i>	D06151	24	2				2		2	2				4		4	8
<i>Halichoerus grypus</i>	D06262	27			2					1			22	2			
		142	2		27	2	7	2	2	7			22	11	46	4	8
<i>Crystophora cristata</i>	D03281	56			9					6	2	18		21			
<i>Pagophilus groenlandica</i>	D05405	15				3				6				6			

Table 4 continued. Collection data and stomach contents of six gray seals (*Halichoerus grypus*), one hooded seal (*Crystophora cristata*), and one harp seal (*Pagophilus groenlandica*).

Species	Tag #	# lenses	# squid beaks	# nematodes	nematodes (g)	Comments
<i>Halichoerus grypus</i>	D04482	3		178	5.4	mostly fish mush & bones; remains of at least 5 fishes: 1 <i>Gadus</i> , 1 <i>Zoarces</i> , 3 ??; remains of 2 shrimp
<i>Halichoerus grypus</i>	D05182	7		89	3.5	smelly, not fully distended; mostly liquid; some bones and otoliths; large nematodes in pyloric area
<i>Halichoerus grypus</i>	D05189	25		236	3.5	lots of flatfish bones & 8 flatfish skulls
<i>Halichoerus grypus</i>	D05406	22		103	5.1	a few worms, bones & otoliths; 1 pebble; mostly liquid
<i>Halichoerus grypus</i>	D06151	8		10	<0.1	1 near non-trace <i>Menidia</i> , 1 near non-trace <i>Alosa</i> ; fish chunks including 1 huge tail
<i>Halichoerus grypus</i>	D06262	24		445	15.2	fully distended with fish chunks; no non-trace; 1 <i>Urophycis</i> skull; mollusk shell fragments
		89		1061	32.7	
<i>Crystophora cristata</i>	D03281	32		15	2.1	11 near non-trace fish: skulls and vertebral segments of 2 <i>Urophycis</i> , 5 <i>Scomber</i> , 2 <i>Clupea</i>
<i>Pagophilus groenlandica</i>	D05405	5	3	638	27.4	fat; caudal peduncle and tail of a large fish, gastropod operculum

Table 5. Collection data and stomach contents 11 common dolphins (*Delphinus delphis*)

Tag #	Trip ID	Fishery Type	Year	Month	Day	Lat	Lon	Depth (m)	Sex	Length (cm)	Reliable?	Empty (g)	Contents (g)
D01726	E590001 Haul #21	bottom otter trawl (mackerel)	1998	3	13	36 48 36	75 17 43	27	M	220	?	676	653
D01730	E590001 Haul #30	bottom otter trawl (mackerel)	1998	3	19	36 37 42	75 19 56	29	F	197	y	573	2574
D01979	E43000 Haul #4	pelagic drift gillnet (swordfish)	1992	3	4	35 44 51	74 46 59	503	F	196	?	759	705
D02819	A31058 Haul #6	pelagic drift gillnet (swordfish)	1998	8	6	40 44 51	66 41 53	503	F	218	y	602	822
D04375	A54026 Haul #12	pelagic drift gillnet (swordfish)	1996	6	20	40 03 23	68 39 05	713	F	196	y	495	543
D04383	A54026 Haul #1	pelagic drift gillnet (swordfish)	1996	6	10	39 51 52	60 37 03	1134	F	175	y	218	294
D06044	D23014 Haul #13	bottom otter trawl	2004	9	27	40 44 48	66 59 54	112	M	231	?	598	627
CCSN 02-011Dd	N/A	stranding, Ellis Landing, Brewster, MA	2002	1	27	41 46 30	70 03 24	0	M	228	y	809	17
CCSN 02-012Dd	N/A	stranding, Ellis Landing, Brewster, MA	2002	1	27	41 46 30	70 03 24	0	M	216	y	649	13
CCSN 02-279Dd	N/A	stranding, Lieutenants Island, Wellfleet, MA	2002	11	23	41 53 48	70 00 18	0	F	176	y	333	11
CCSN 03-008Dd	N/A	stranding, Scraggy Neck, Catumet, MA	2003	1	10	41 39 48	70 37 48	0	M	229	y	715	11
										207.5			6270

Table 5 continued. Collection data and stomach contents 11 common dolphins (*Delphinus delphis*).

Tag #	Bones (g)	# Otoliths	<i>Alosa</i>	<i>Arctozenus</i>	<i>Benthoosema</i>	<i>Ceratoscopelus</i>	<i>Chlorophthalmus</i>	<i>Diaphus</i>	<i>Gadella</i>	Gempylids	<i>Hygophum</i>	<i>Lestrolepis</i>	<i>Lobianchia</i>	<i>Maurolicus</i>	<i>Melanogrammus</i>
D01726	4	7				1									
D01730	20.2	19	3												
D01979	49.9	1575		2		1324	2	30				6		8	
D02819	6.5	3000			2	2674		4		4	128		7		
D04375	5.5	2370		2	67	2014		6	5		101				
D04383	0.7	270			28	207					10				
D06044	3.6	36													2
CCSN 02-011Dd		0													
CCSN 02-012Dd		0													
CCSN 02-279Dd		0													
CCSN 03-008Dd		0													
	90.4	7277	3	4	97	6220	2	40	5	4	239	6	7	8	2

Table 5 continued. Collection data and stomach contents 11 common dolphins (*Delphinus delphis*).

Tag #	<i>Merluccius</i>	<i>Notoscopelus</i>	Ophidiid	<i>Peprilus triacanthus</i>	<i>Scomber</i>	<i>Scopelosaurus</i>	<i>Symbolophorus</i>	<i>Urophycis</i>	<i>Vinceguerra</i>	Unidentified	Unidentifiable
D01726					5						1
D01730			1		13			2			
D01979				130					23		50
D02819	1	41				1		6			132
D04375							5				170
D04383										2	23
D06044	11										23
CCSN 02-011Dd											
CCSN 02-012Dd											
CCSN 02-279Dd											
CCSN 03-008Dd											
	12	41	1	130	18	1	5	8	23	2	399

Table 5 continued. Collection data and stomach contents 11 common dolphins (*Delphinus delphis*).

Tag #	<i>Nemichthys</i>	lenses	squid beaks	nematodes	nematodes (g)	crustaceans	Comments
D01726		6		3	<0.1		1 non-trace <i>Scomber scombrus</i> (233mm s/nose; 245g)
D01730			37				3 non-trace <i>S. scombrus</i> (340, 358, 377mm; 383, 472, 598g)
D01979		1980	504	4	<0.1	249	nothing non-trace; near non-trace: 2 <i>Peprilus</i> ; 249 sergestid heads
D02819		350	17	18	<0.1		nothing non-trace; pyloric had 1075 otoliths and 3000 lenses
D04375	3	593	64	31	0.4	19	stomach not full! 19 sergestid heads; 2000 fish lenses in pyloric
D04383	20	210	147	13	0.1		1 small non-trace <i>Enoploteuthis</i> ; pyloric 600 otoliths, 1000 lenses, many tiny squid beaks
D06044		23	27				non-trace: 4 <i>M. bilinearis</i> (180, 185, 210, 215mm); 1 squid (190mm); unusual stomach configuration
CCSN 02-011Dd							fore, main, and pyloric stomachs had no solid contents
CCSN 02-012Dd							very compact, clean and completely empty
CCSN 02-279Dd							fore, main, and pyloric stomachs had no solid contents
CCSN 03-008Dd				3			fore, main, and pyloric stomachs had no solid contents; small nematodes discarded
	23	3162	796	72	0.5	268	

Table 6. Collection data and stomach contents of 19 white-sided dolphins (*Lagenorhynchus acutus*) from the Gulf of Maine.

Tag #	Trip ID	Fishery Type	Year	Month	Day	Lat	Lon	Depth (m)	Sex	Length (cm)	Reliable?	Empty (g)	Contents (g)	Bones (g)
D0A3814	C60004 Haul#20	bottom otter trawl	2004	2	4	42 28 42	69 54 30	185	M	223	?	913	1106	25.4
D0A3816	C60005 Haul#26	bottom otter trawl	2004	2	25	42 35 36	69 40 42	260	M	189	n	648	1671	0.9
D05322	D28014 Haul #21	bottom otter trawl	2005	3	8	42 39 36	69 41 48	265	M	189	y	422	64	0
D05452	C14008 Haul #9	bottom otter trawl	2004	4	9	42 04 42	67 37 30	183	N/A	205	n	485	606	68.5
D05870	B79004 Haul #1	bottom otter trawl	2001	3	27	41 45 06	68 26 30	221	N/A	N/A	y	483	170	0
D06045	D23006 Haul #32	bottom otter trawl	2005	3	21	41 59 00	67 57 18	181	F	234	y	1017	270	29
D06465	D35006 Haul #8	bottom otter trawl	2005	2	25	41 31 00	69 08 06	144	M	190	y	594	558	5
D06466	D35006 Haul #14	bottom otter trawl	2005	2	27	42 22 06	69 51 00	225	M	204	y	801	1265	27.4
D06885	C85010 Haul #19	bottom otter trawl	2005	3	25	42 14 06	67 53 06	240	M	272	?	1654	546	6.4
D06895	C14022 Haul # 6	bottom otter trawl	2003	8	21	42 02 48	68 16 30	186	F	185	?	577	1823	38.5
D08651	D67006 Haul#26	bottom otter trawl	2005	4	5	43 00 18	69 48 18	210	M	225	?	968	56	0
D08692	D76010 Haul #11	bottom otter trawl	2005	3	16	42 19 18	68 27 00	174	M	164	y	237	111	6.3
D08693	D76010 Haul #19	bottom otter trawl	2005	3	17	41 40 00	68 28 06	152	F	192	n	473	60	0.5
CCSN 02-049La	N/A	stranding, Chequesset Neck, Wellfleet, MA	2002	3	5	41 55 40	70 03 11	0	M	192	n	557	<1	0
CCSN 02-050La	N/A	stranding, Great Island, Wellfleet, MA	2002	3	5	41 55 32	70 04 15	0	M	203	n	671	26	0
CCSN 02-052La	N/A	stranding, Lieutenants Is., Wellfleet, MA	2002	3	5	41 53 59	70 01 04	0	M	197	n	608	16	0
CCSN 02-083La	N/A	stranding, Powers Landing, Wellfleet, MA	2002	3	16	41 55 46	70 02 52	0	M	249	n	1056	42	0
CCSN 02-084La	N/A	stranding, Powers Landing, Wellfleet, MA	2002	3	17	41 55 46	70 02 52	0	F	213	n	787	5	0
CCSN 02-085La	N/A	stranding, Powers Landing, Wellfleet, MA	2002	3	17	41 55 46	70 02 52	0	M	255	n	1014	57	0
										210.1		13965	8452	207.9

Table 6 continued. Collection data and stomach contents of 19 white-sided dolphins (*Lagenorhynchus acutus*) from the Gulf of Maine.

Tag #	# Otoliths	<i>Alosa</i>	<i>Benthoosema</i>	<i>Ceratoscopelus</i>	<i>Clupea</i>	<i>Diaphus</i>	<i>Enchelyopus</i>	Gadidae	<i>Mauroliticus</i>	<i>Melanogrammus</i>	<i>Merluccius</i>	<i>Nezumia</i>	<i>Osmerus</i>	<i>Urophycis</i>	Unidentified	Unidentifiable
D0A3814	126										123			3		
D0A3816	191				1						188					2
D05322	15			1										4		10
D05452	278									72	200			6		
D05870	11															11
D06045	388		8		1		3			22	338	6		9		1
D06465	40								1	26	3			10		
D06466	173	2					17		1		132			21		
D06885	42		2			1					35			2		2
D06895	124				19			6			99					
D08651	12										7			1		4
D08692	52										46			4	2	
D08693	10										5			5		
CCSN 02-049La	13															13
CCSN 02-050La	62												16			46
CCSN 02-052La	37															37
CCSN 02-083La	3															3
CCSN 02-084La	14															14
CCSN 02-085La	15															15
	1606	2	10	1	21	1	20	6	2	120	1176	6	16	65	2	158

Table 6 continued. Collection data and stomach contents of 19 white-sided dolphins (*Lagenorhynchus acutus*) from the Gulf of Maine.

Tag #	<i>Myxine</i> teeth	lenses	squid beaks	octopod beaks	nematodes	nematodes (g)	other worms	crustaceans	Comments
D0A3814		93		2					near non-trace: 6 <i>Merluccius</i> ; pyloric missing
D0A3816		230							non-trace: 30 <i>M. bilinearis</i> ; near non-trace: 12 <i>M. bilinearis</i> ; big slit in forestomach
D05322	12	228	5	8	18	0.1	70		almost empty; "other worms" = cestodarians?
D05452		245		3					nothing non-trace; clean bones and otoliths and beaks
D05870		100	14	2	69	<0.1			nearly empty; contents mostly liquid
D06045	24	268	8	15	2	<0.1			nothing non-trace; clean bones and otoliths and beaks
D06465		42	1	3	58	<0.1	11		two non-trace fishes: 1 <i>M. aeglefinus</i> (280mm, 205g), 1 <i>Urophycis tenuis</i> (225mm, 102g)
D06466	97	420		265	4	<0.1	72		two non-trace <i>U. tenuis</i> (250mm, 139g; 255mm); 6 acanthocephalans
D06885		74	2	4	3	<0.1	25		near non-trace: 1 <i>M. bilinearis</i> head, 1 <i>Urophycis</i> head; "other worms" = trematodes
D06895	7	107			1	<0.1			full stomach with near non-trace: 3 <i>Clupea</i> skeletons and 2 <i>Clupea</i> skulls
D08651	1	5							1 almost empty; a few otoliths, <i>Myxine</i> teeth, and one large Cirolanid isopod
D08692	60	71	60	14					octopod & squid beaks, fish bones & otoliths; no muscle; no nematodes
D08693	16	6	19	32					sticky, gooey mass with imbedded stuff; octopod beaks, squid beaks
CCSN 02-049La		6			26	<0.1			posterior tip of forestomach missing
CCSN 02-050La		22							a huge hole in forestomach
CCSN 02-052La		40							large hole in main; pyloric stomach missing; lenses (green), few otoliths, and sand
CCSN 02-083La		15			1	<0.1	10		large hole in main; pyloric stomach missing; parasites mostly trematodes
CCSN 02-084La		0			226	3.6			large hole in fore; two holes in main; pyloric missing
CCSN 02-085La									large hole in main; partial pyloric
	217	83	109	348	408	3.7	188	1	

Table 7. Collection data and stomach contents of two Pantropical spotted dolphins (*Stenella attenuata*) and 14 Atlantic spotted dolphins (*Stenella frontalis*).

Species	Tag #	Trip ID	Fishery Type	Year	Month	Day	Lat	Lon	Depth (m)	Sex	Length (cm)	Reliable?	Full (g)	Empty (g)	Contents (g)	Bones (g)
<i>Stenella attenuata</i>	D01042	E44000 set 1	pelagic drift gillnet	1992	4	24	35 41 27	74 42 11	850	M	185	n	942	352	590	11
<i>Stenella attenuata</i>	D01982	E38000 set 2	pelagic drift gillnet	1992	2	27	35 29 19	74 46 23	1000	M	192	y	858	340	518	11
											188.5				1108	22
<i>Stenella frontalis</i>	D00370	A92000 set 1	pelagic drift gillnet	1994	3	13	35 28 51	74 48 07	1554	M	149	y	578	187	391	13
<i>Stenella frontalis</i>	D00393	B10000 set 2	pelagic drift gillnet	1990	10	12	40 26 51	67 12 35	594	M	171	y	1725	362	1363	25
<i>Stenella frontalis</i>	D00396	B10000 set 2	pelagic drift gillnet	1990	10	12	40 26 51	67 12 35	594	M	186	n	N/A	N/A	N/A	
<i>Stenella frontalis</i>	D00402	E59002 set 5	pelagic drift gillnet	1994	4	26	36 25 39	74 36 43	1500	M	168	y	1715	318	1397	42
<i>Stenella frontalis</i>	D00403	E59002 set 5	pelagic drift gillnet	1994	4	26	36 25 39	74 36 43	1500	M	184	n	851	542	309	13
<i>Stenella frontalis</i>	D01504	E54000 set 4	pelagic drift gillnet	1994	1	6	36 41 30	74 40 30	549	N/A	200	n	1087	529	558	18
<i>Stenella frontalis</i>	D01505	E54000 set 4	pelagic drift gillnet	1994	1	6	36 41 30	74 40 30	549	N/A	194	n	1116	365	751	2
<i>Stenella frontalis</i>	D01506	E54000 set 4	pelagic drift gillnet	1994	1	6	36 41 30	74 40 30	549	N/A	194	n	1568	407	1161	5
<i>Stenella frontalis</i>	D01507	E54000 set 4	pelagic drift gillnet	1994	1	6	36 41 30	74 40 30	549	N/A	184	n	1006	897	109	N/A
<i>Stenella frontalis</i>	D01705	E58000 set 3	pelagic drift gillnet	1994	4	4	35 55 43	74 38 37	1417	N/A	169	n	N/A	N/A	N/A	N/A
<i>Stenella frontalis</i>	D01972	E43000 set 2	pelagic drift gillnet	1992	3	6	35 52 45	74 49 05	500	F	172	n	292	260	32	N/A
<i>Stenella frontalis</i>	D01983	E38000 set 2	pelagic drift gillnet	1992	2	27	35 29 19	74 46 23	1000	F	N/A	n	473	163	310	7
<i>Stenella frontalis</i>	D01990	E38000 set 6	pelagic drift gillnet	1992	3	2	35 37 27	74 46 14	686	M	196	n	750	450	300	7
<i>Stenella frontalis</i>	D01992	E38000 set 6	pelagic drift gillnet	1992	3	2	35 37 27	74 46 14	686	M	191	y	691	404	287	5
											181.3				6968	137

Table 7 continued. Collection data and stomach contents of two pantropical spotted dolphins (*Stenella attenuata*) and 14 Atlantic spotted dolphins (*Stenella frontalis*).

Species	Tag #	# Otoliths	<i>Arctozenus</i>	<i>Benthoosema</i>	<i>Bathylagus</i>	<i>Bregmaceros</i>	<i>Ceratoscopelus</i>	<i>Clupea</i>	<i>Diaphus</i>	<i>Diaphus/Lobianchia</i>	Gempylids	<i>Hygophum</i>	<i>Lampanyctus</i>	<i>Lobianchia</i>	<i>Maurolicus</i>
<i>Stenella attenuata</i>	D01042	1740		30		2	1454			2	2				
<i>Stenella attenuata</i>	D01982	1883		3			1537		227		9				
		3623		33		2	2991		227	2	11				
<i>Stenella frontalis</i>	D00370	1735		4			1659			8	7				
<i>Stenella frontalis</i>	D00393	1815					1136		1		14	522		6	
<i>Stenella frontalis</i>	D00396	59					45					11			
<i>Stenella frontalis</i>	D00402	1517					1134		16		26	18			
<i>Stenella frontalis</i>	D00403	393		7			326								
<i>Stenella frontalis</i>	D01504	2043					1908			1	3				
<i>Stenella frontalis</i>	D01505	631					227			20	59				
<i>Stenella frontalis</i>	D01506	2792					2082			34	19	1			
<i>Stenella frontalis</i>	D01507	913					671	1			15				
<i>Stenella frontalis</i>	D01705	29		4			15				8				
<i>Stenella frontalis</i>	D01972	714		23	8	3	637			18	1	14			
<i>Stenella frontalis</i>	D01983	496				1	338		124		6				
<i>Stenella frontalis</i>	D01990	982	3	1	2		829			5	2	2	1		6
<i>Stenella frontalis</i>	D01992	1714					753		22			2			
		15833	3	39	10	4	11760	1	163	86	160	570	1	6	6

Table 7 continued. Collection data and stomach contents of two pantropical spotted dolphins (*Stenella attenuata*) and 14 Atlantic spotted dolphins (*Stenella frontalis*).

Species	Tag #	Trip ID	# Otoliths	<i>Myctophum</i>	<i>Notoscopelus</i>	<i>paralepidid</i>	<i>Peprilus triacanthus</i>	<i>Pterycombus brama</i>	<i>Scomber</i>	<i>Scopelosaurus</i>	<i>Symbolophorus</i>	Unidentified	Unidentifiable	<i>Nemichthys</i> (ethmoid)	# lenses
<i>Stenella attenuata</i>	D01042	E44000 set 1	1740							8			243		N/A
<i>Stenella attenuata</i>	D01982	E38000 set 2	1883		2	2	7			6		4	86		N/A
			3623		2	2	7			14		4	329		
<i>Stenella frontalis</i>	D00370	A92000 set 1	1735			2						28	27	1	N/A
<i>Stenella frontalis</i>	D00393	B10000 set 2	1815							11	11	9	105		N/A
<i>Stenella frontalis</i>	D00396	B10000 set 2	59		1					2				4	N/A
<i>Stenella frontalis</i>	D00402	E59002 set 5	1517	2				165		18	6	30	100		N/A
<i>Stenella frontalis</i>	D00403	E59002 set 5	393				58		2				126		N/A
<i>Stenella frontalis</i>	D01504	E54000 set 4	2043		77					38	2		14		N/A
<i>Stenella frontalis</i>	D01505	E54000 set 4	631		135					98		2	89		N/A
<i>Stenella frontalis</i>	D01506	E54000 set 4	2792		302					99		5	250		N/A
<i>Stenella frontalis</i>	D01507	E54000 set 4	913		25					24	2		175		N/A
<i>Stenella frontalis</i>	D01705	E58000 set 3	29		1								1		N/A
<i>Stenella frontalis</i>	D01972	E43000 set 2	714				2					4	4		N/A
<i>Stenella frontalis</i>	D01983	E38000 set 2	496				10					3	14		N/A
<i>Stenella frontalis</i>	D01990	E38000 set 6	982	1		3				2			125		N/A
<i>Stenella frontalis</i>	D01992	E38000 set 6	1714	4		2							931		N/A
			15833	7	541	7	70	165	2	292	21	81	1961	5	

Table 7 continued. Collection data and stomach contents of two pantropical spotted dolphins (*Stenella attenuata*) and 14 Atlantic spotted dolphins (*Stenella frontalis*).

Species	Tag #	# squid beaks	# nematodes	nematodes (g)	other worms	crustacean	Comments
<i>Stenella attenuata</i>	D01042	22	N/A	N/A	N/A	N/A	non-trace: 1 gempylid, 3 <i>Scopelosaurus</i> , 5 squid; 50 <i>C. maderensis</i>
<i>Stenella attenuata</i>	D01982	68	N/A	N/A	N/A	N/A	non-trace: 2 <i>Peprilus</i> , 1 paralepidid; 47 myctophids; 8 squids; best myctophids we've ever seen.
		90					
<i>Stenella frontalis</i>	D00370	4	N/A	N/A	N/A	N/A	liquid & bones, otoliths, & lenses; few small squid beaks
<i>Stenella frontalis</i>	D00393	14	N/A	N/A	N/A	N/A	non-trace: 2 whole squid preserved: 60mm, 180mm mantle lengths; mostly fish mush
<i>Stenella frontalis</i>	D00396		N/A	N/A	N/A	N/A	partial contents; includes <i>Nemichthys</i> jaws: 4upper, 2 lower; 1 <i>Scopelosaurus</i> parasphenoid
<i>Stenella frontalis</i>	D00402	152	N/A	N/A	N/A	N/A	non-trace: 5 bramids & 6 whole squid
<i>Stenella frontalis</i>	D00403	29	N/A	N/A	N/A	N/A	non-trace: 1 <i>Scomber</i> (300mm SL 125g)
<i>Stenella frontalis</i>	D01504		N/A	N/A	N/A	N/A	non-trace: ~42 <i>C. maderensis</i> and 15 <i>Scopelosaurus</i> ; 4 near non-trace <i>Scopelosaurus</i> (Harbison took photos.)
<i>Stenella frontalis</i>	D01505	54	N/A	N/A	N/A	N/A	non-trace: 3 gempylids, 8 <i>Scopelosaurus</i> , 3 squid
<i>Stenella frontalis</i>	D01506	44	N/A	N/A	N/A	N/A	non-trace: 2 gempylids, 2 <i>Scopelosaurus</i> ; near non-trace: 12 <i>Scopelosaurus</i> , 1 gempylid, 6 <i>C. maderensis</i> , 1 <i>Notoscopelus</i>
<i>Stenella frontalis</i>	D01507	35	N/A	N/A	N/A	N/A	non-trace: 1 <i>Scopelosaurus</i> 160mm
<i>Stenella frontalis</i>	D01705		N/A	N/A	N/A	N/A	received partial contents only: 4 non-trace gempylids plus a few otoliths stuck to them
<i>Stenella frontalis</i>	D01972		N/A	N/A	N/A	N/A	no muscle, few bones; nematodes
<i>Stenella frontalis</i>	D01983	26	N/A	N/A	N/A	N/A	non-trace: several myctophids, 2 gempylids, 6 squid; 3 <i>Peprilus</i> skulls
<i>Stenella frontalis</i>	D01990	29	N/A	N/A	N/A	N/A	non-trace: 1 gempylid (190mm)
<i>Stenella frontalis</i>	D01992	23	N/A	N/A	N/A	N/A	non-trace: 6 squid; 37near non-trace fish; digested <i>C. maderensis</i> otoliths (remains) indicate a previous meal?
		410					

Table 8. Collection data and stomach contents of one minke whale (*Balaenoptera acutorostrata*), one beluga whale (*Delphinapterus leucas*), one longfinned pilot whale (*Globicephala melas*), one humpback whale (*Megaptera novaeangliae*), and one Sowerby's beaked whale (*Mesoplodon bidens*).

Species	Tag #	Fishery Type	Year	Month	Day	Lat	Lon	Depth (m)	Sex	Length (cm)	Reliable?	Empty (g)	Contents (g)	Bones (g)
<i>Balaenoptera acutorostrata</i>	MH 03-621Ba	stranding, Manchester, MA	2003	10	30	42 34 12	70 45 36	0	M	648	n	N/A	~2000	352.2
<i>Delphinapterus leucas</i>	MH 04-513D1 "Poco"	stranding, South Portland, ME	2004	11	15	43 38 39	70 14 50	0	M	264	n	1496	10	0
<i>Globicephala melas</i>	CCSN 03-106Gm	stranding, Gansett, Woods Hole, MA	2003	5	11	41 31 58	70 40 07	0	F	420	?	N/A	~900	424
<i>Megaptera novaeangliae</i>	MH03-602Mn	stranding, New Harbor, ME	2003	9	30	43 48 54	69 28 12	0	M	1097	?	N/A	1881	~100
<i>Mesoplodon bidens</i>	MH03-604Mb	stranding, Kennebunk, ME	2003	10	2	43 22	70 30	0	N/A	N/A	?	~6350	0	0

Table 8 continued. Collection data and stomach contents of one minke whale (*Balaenoptera acutorostrata*), one beluga whale (*Delphinapterus leucas*), one longfinned pilot whale (*Globicephala melas*), one humpback whale (*Megaptera novaeangliae*), and one Sowerby's beaked whale (*Mesoplodon bidens*).

Species	Tag #	# Otoliths	Clupeidae	Gadidae	<i>Urophycis</i>	<i>Zoarces</i>	Unidentified	Unidentifiable	# lenses	# squid beaks	# nematodes	nematodes (g)	crustaceans
<i>Balaenoptera acutorostrata</i>	MH 03-621Ba	175+	175+										
<i>Delphinapterus leucas</i>	MH 04-513D1 "Poco"	4		2	1		1		~600		12	0.2	86
<i>Globicephala melas</i>	CCSN 03-106Gm	12				6		6	38	11	~1000	120	
<i>Megaptera novaeangliae</i>	MH03-602Mn	0											
<i>Mesoplodon bidens</i>	MH03-604Mb	0											

Table 8 continued. Collection data and stomach contents of one minke whale (*Balaenoptera acutorostrata*), one beluga whale (*Delphinapterus leucas*), one longfinned pilot whale (*Globicephala melas*), one humpback whale (*Megaptera novaeangliae*), and one Sowerby's beaked whale (*Mesoplodon bidens*).

Species	Tag #	Comments
<i>Balaenoptera acutorostrata</i>	MH 03-621Ba	partial? contents only: received 2 bags; estimated 3848 clupeids
<i>Delphinapterus leucas</i>	MH 04-513D1 "Poco"	mostly crustacean parts (<i>Crangon septemspinosa</i>); forestomach opened completely at time of necropsy
<i>Globicephala melas</i>	CCSN 03-106Gm	remains of at least 12 <i>Zoarces</i> ; echinoderm tests (<i>Echinarachnius parma</i>) 281g secondary consumption by <i>Zoarces</i>
<i>Megaptera novaeangliae</i>	MH03-602Mn	received partial contents only; sand and gravel with shell hash and a few clupeid bones
<i>Mesoplodon bidens</i>	MH03-604Mb	healthy, immaculately clean -- not pale, no parasites, no ulcers; photos taken