



# FINDERS INFORMATION NETHERLANDS 2021

SNS Fulmar Study Report -  
Finders-Information\_NL2021\_batch08

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Wageningen Marine Research



## Abstract

Dit is een geïllustreerd rapport over de 81 Noordse Stormvogels die in 2021 in Nederland werden onderzocht in het kader van het monitoring programma van plastics in hun magen. Zulk onderzoek maakt deel uit van het internationale programma dat metingen verricht aan de voortgang naar de zogenoemde 'Goede Milieu Toestand (GMT)' in de Europese zeegebieden. Volledige studieresultaten worden in jaarlijkse formele onderzoeksrapporten gepubliceerd.

*This is an illustrated report on the 81 Northern Fulmars investigated in the Netherlands in 2021 for the monitoring program of plastic particles in their stomachs. This research is part of the international program that measures progress towards the so-called 'Good Environmental Status (GES)' in European marine waters. Full study results will be published in a formal research report.*

## Citation

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Beached fulmar  
Drawing by Arnold Gronert



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Beste vrijwilligers

(see next page for English text)

Dit document beoogt onze project-vrijwilligers en andere geïnteresseerden te informeren over de verzamelde Noordse Stormvogels voor ons graadmeteronderzoek van plastic in de magen. Deze lange termijn monitoring wordt uitgevoerd in opdracht van nationale en internationale overheden om wetenschappelijke informatie te verschaffen over de huidige situatie en ontwikkeling van plastic zwerfvuil in de Noordzee. Deze update (nr 8) betreft de 81 Noordse stormvogels gevonden in Nederland in 2021.

Niet alle ontvangen vogels hadden een maag, maar we blijven benadrukken, dat we liever zo nu en dan een vogel met incomplete of ontbrekende maag op de snijtafel hebben, dan dat er bruikbare stormvogels op het strand blijven liggen! Dus blijf s.v.p. ook oudere vieze kadavers verzamelen zolang je het enigszins mogelijk acht dat de maag nog aanwezig is. Laat een dode stormvogel alleen maar liggen als het echt zeker is dat maag e.d. ontbreekt.

Om het verzamelen van oude stinkende kadavers iets minder onaangenaam te maken, hebben we op 15 april 2021 een bericht op ons dossier [www.wur.nl/plastics-stormvogels](http://www.wur.nl/plastics-stormvogels) geplaatst met een filmpje met een handleiding hoe je vieze vogels toch met schone handen kunt verzamelen. Het filmpje staat ook op YouTube [www.youtube.com/watch?v=7kzh8es7VGA](http://www.youtube.com/watch?v=7kzh8es7VGA)

Het rapport bevat voor iedere onderzochte vogel een pagina met detailinformatie en foto's van de maaginhoud. Dus er zijn ook pagina's voor de vogels zonder bruikbare maag of waar de maag geen plastic bevatte. Speciale pagina's kunnen zijn toegevoegd ter illustratie van andere opmerkelijke zaken. De meeste afkortingen op de individuele pagina's zijn min of meer vanzelfsprekend of ter plekke verklaard. Alleen de afkorting voor doodsoorzaak is misschien niet altijd duidelijk voor wat er aan de hand was. Daartoe geeft een supplement aan het eind van het document uitleg over gebruikte afkortingen.

We bedanken iedereen voor de steun aan dit onderzoek: niet alleen de mensen die de hier besproken stormvogels hebben verzameld, maar ook al diegenen die jaar in jaar uit voor ons op de uitkijk zijn en trouw met een plastic verzamelzak naar het strand gaan. De resultaten van al die inspanningen bepalen mede hoe het zwerfvuil-beleid van de Nederlandse en Europese overheden zich ontwikkelt.

Met veel dank voor alle hulp,

Susanne Kühn, Jan Andries van Franeker, André Meijboom en Oliver Bittner

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## Nederlandse Samenvatting

Dit rapport is een geïllustreerde weergave van de hoeveelheid plastic in magen van Noordse Stormvogels (*Fulmarus glacialis*) voor de vrijwilligers in het monitoring programma. Voor iedere gevonden vogel wordt informatie kort samengevat en met foto's van maaginhouden geïllustreerd. In 2021 werden 81 dode vogels onderzocht, waarvan er zes geen bruikbare maag meer bevatten, en vier hadden voorafgaand aan hun dood langer dan drie dagen levend in een vogelasiel doorgebracht. Zij worden niet voor de trendanalyse gebruikt, omdat plastics uit de maag verdwijnen door slijtage of verbrokkeling. Maar zulke vogels verschaffen ons op de langere termijn mogelijk wel meer informatie over de snelheid van verdwijnen van verschillende soorten plastic uit de maag. Voor de monitoring analyse waren dus 71 magen beschikbaar.

Dit voor een enkel jaar vrij grote aantal vogels zette een in 2020 met 14 vogels begonnen toename van plastics door. Om onstabiele jaarlijkse veranderingen te ondervangen, wordt de 'huidige' situatie altijd beschreven als het gemiddelde over de afgelopen vijf jaar. In 2017-2021 werden 179 magen onderzocht, waarvan 94% plastics bevatte, en 50% meer dan 0.1 gram. Als internationale doelstelling geldt dat dit laatste percentage tot onder de 10% teruggebracht zou moeten worden. Onder de 179 vogels bevat de gemiddelde maag nu ietsje minder dan 26 stukjes plastic, met een gewicht van 0.25 g. Gemeten over de afgelopen 10 jaar is, na eerdere afnames, geen statistisch significante verandering meer waarneembaar.

*Dear volunteers,*

*This document intends to inform our project-volunteers and others interested about the beached Northern Fulmars which they collected for the study of plastics in the stomachs. This long-term monitoring is commissioned by national and international authorities in order to provide scientific information about current levels of, and trends in the abundance of plastic litter found in the North Sea. This update is nr 8 for the Netherlands, providing information on 81 fulmars found during 2021.*

*We occasionally receive birds without a stomach, but these are also dealt with in this report because we aim to provide a full overview. Please note that we strongly prefer to receive occasional 'empty' old and dirty birds to avoid that any fulmar with stomach would be left on the beach! When in doubt, just collect the bird, and don't be disappointed if the occasional one proves to have no stomach.*

*In order to promote the collection of old and smelly corpses, on 15 April 2021 we have placed a message on our dossier [www.wur.eu/plastics-fulmars](http://www.wur.eu/plastics-fulmars) that contains a short video on how to collect a dirty bird with clean hands. The short video is also available on YouTube [www.youtube.com/watch?v=QvzadnYkapM](https://www.youtube.com/watch?v=QvzadnYkapM)*

*The report provides a separate information page with stomach content photos for each individual bird. Pages are also included for birds lacking a stomach or having a stomach without any plastic. Incidental additional pages may be provided to illustrate other remarkable issues. Most abbreviations used to provide information are fairly self-evident or directly explained. However, the acronyms for cause of death are sometimes less straightforward and are explained in the supplementary pages at the end of this document.*

*We thank all helpers, not only those who found a bird discussed in this report, but all the volunteers who year after year are on the lookout for fulmars suitable for our project. Your individual support represents an important contribution to marine litter policy decisions!*

*We are extremely thankful for your help,  
Suse Kühn, Jan van Franeker, André Meijboom and Oliver Bittner*

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## **Summary**

*This document is an illustrated report for the surveyors in the monitoring program of plastics particles in stomachs of beached northern fulmars (*Fulmarus glacialis*). It contains short information and photos of stomach contents of individual birds. In 2021 a total of 81 corpses could be recovered, six of which contained no stomach. Four birds had been alive in rehabilitation for more than 3 days. Stomachs of such birds are not used for monitoring analysis because plastics, while the birds are in care, could be grinded and/or excreted fairly rapidly. However, with a sufficiently large number of such rehabilitation birds, we do hope to get some further insights in the speed of degradation of different types of plastics in the stomachs. Thus we had 71 stomachs that were used for monitoring.*

*This large annual sample continued an increase of plastics observed also in the small sample of 2020. To avoid annual variations between sometimes small annual samples, the 'current' in the fulmar monitoring program is described as the average over the past five years. Over the 2017-2021 period, we investigated 179 stomachs. Among these, 94% had plastic, and 50% contained more than 0.1g of plastic, whereas the international aim is that the latter percentage must be reduced to under 10%. Among the 179 fulmars, the average stomach contained a bit less than 26 plastic particles, weighing 0.25 g. Over the past 10 years, following earlier decreases, a statistically significant change can no longer be observed.*

## Waar vind ik mijn vogel ? - *Where can I find my bird?*

De onderstaande lijst helpt u om de gegevens over door u gevonden vogels terug te vinden. *The list below helps to find data on the bird that you found.*

Surveyor family name	Bird nrs NET-2021-	with
Baptist, Martin	31	
Brugge, Maarten	3,4,20,22,24,28,41,64,73	
de Jong, Jan	71,72	
de Vries, Arnout	27	
De WULP, Vogelasiel	26,30	Dierenambulance Den Haag
De WULP, Vogelasiel	78,79,80,81	Marian Mensink
Dijkstra, Arjen	54	
ECOMARE, Vogelasiel	1,75	
FAUNAVISIE, Pim Lollinga	10,11,12,13	
Gronert, Arnold	49,68	
Havermans, Jarco	25	
Heusinkveld, Jannes	5,6	Carlijn Lammers
Keizer, Robert	45,65	Suse Kühn
Krol, Johan	47,48,51,52,53,55,56,57,58,59,60,61,62,63	
Kühn, Suse	2,7,8,9,23,42,43,44,50,66,67,69	
Leopold, Mardik	39,74	Kyra Leopold & Timo Roskam
Oortwijn, Ronald	46	Jan Andries van Franeker
Ruppert, Theo	40	Suse Kühn
Schepers, Job	70	
ten Horn, Job	29	
van den Berge, Ad	32,33,34,37,38	
van der Hiele, Jaap	21,35	
van Franeker, Jan Andries	36	Yvonne Hermes
van Hoven, Cees	14,15,16,17,18,19	
Zuhorn, Carl	76,77	

# Overview of plastics in stomachs of 81 fulmars found in the Netherlands during 2021 – 4 pages

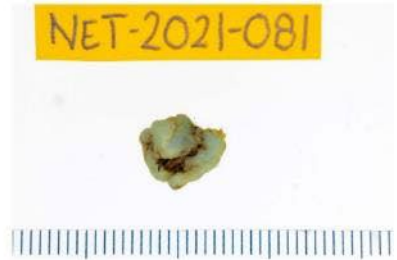
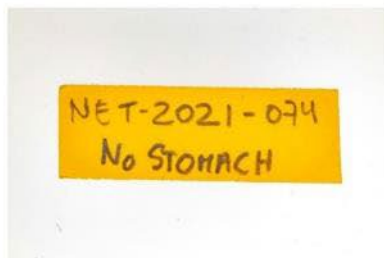
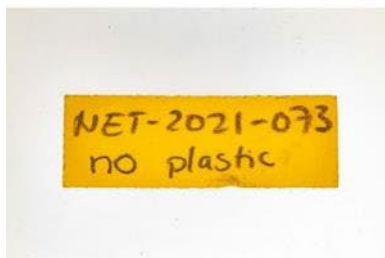
scale indicates mm









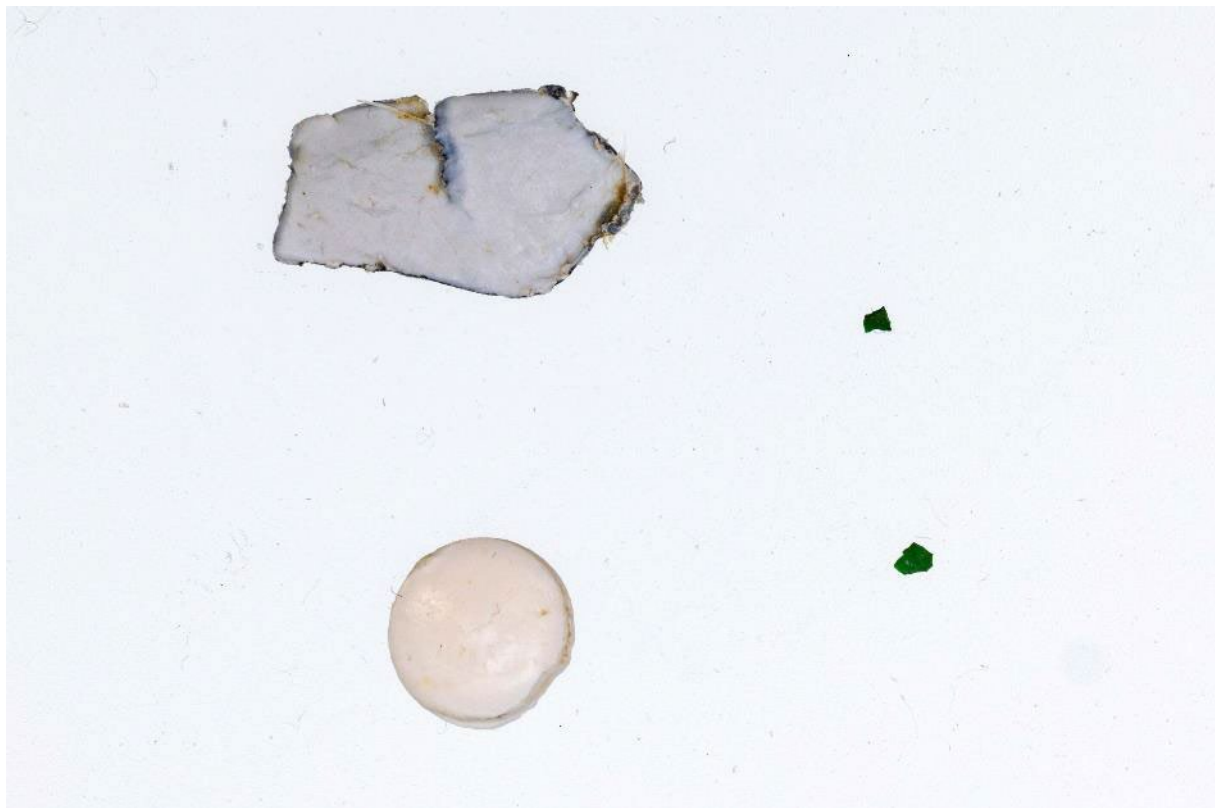


**PAGINAS VOOR INDIVIDUELE VOGELS**  
samengevatte resultaten van dissectie en maaganalyse,  
met foto's van de plastics in de magen.  
(de kleinere fotos tonen het registratienummer en een schaalverdeling in mm)

***PAGES FOR INDIVIDUAL BIRDS***  
*summary findings from dissection and stomach analyses,*  
*with photos of plastics in the stomachs.*  
*The smaller photos show label with number and a scale bar in mm.*

**Nr: NET-2021-001**

<b>JAFCODE</b>	NET-2021-001
Country	Netherlands
Location	Texel Paal 23
Date	17-Jan-2021
Finder	Ecomare
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	L
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for unknown reason)	PLU
Notes from dissection	Kept for mounting, Artis skull plastination (Contact: Harrie Knol: H.Knol@artis.nl)
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	2
Total mass of plastic in stomach (g)	0.0338



**Nr: NET-2021-002**

<b>JAFCODE</b>	NET-2021-002
Country	Netherlands
Location	Texel Paal 22
Date	11-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for emaciated with unknown reason)	ING
Notes from dissection	fatty matter in throat lung (everywhere) and around kidney. Material from different areas and gut sampled. Pics taken
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	2
Total mass of plastic in stomach (g)	0.0021



**Nr: NET-2021-003**

<b>JAFCODE</b>	NET-2021-003
Country	Netherlands
Location	Texel Paal 11
Date	15-Mar-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for unknown reason)	CAN
Notes from dissection	large cancer perforating skin on belly 20x15mm; cancer on stomach 23x20mm
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	15
Total mass of plastic in stomach (g)	2.1103



**Nr: NET-2021-004**

<b>JAFCODE</b>	NET-2021-004
Country	Netherlands
Location	Texel Paal 14
Date	27-Mar-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for unknown reason)	STA
Notes from dissection	inflammation on stomach wall 9x7mm
nr of industrial plastic pellets	4
nr of consumer debris plastic particles	95
Total mass of plastic in stomach (g)	0.1432



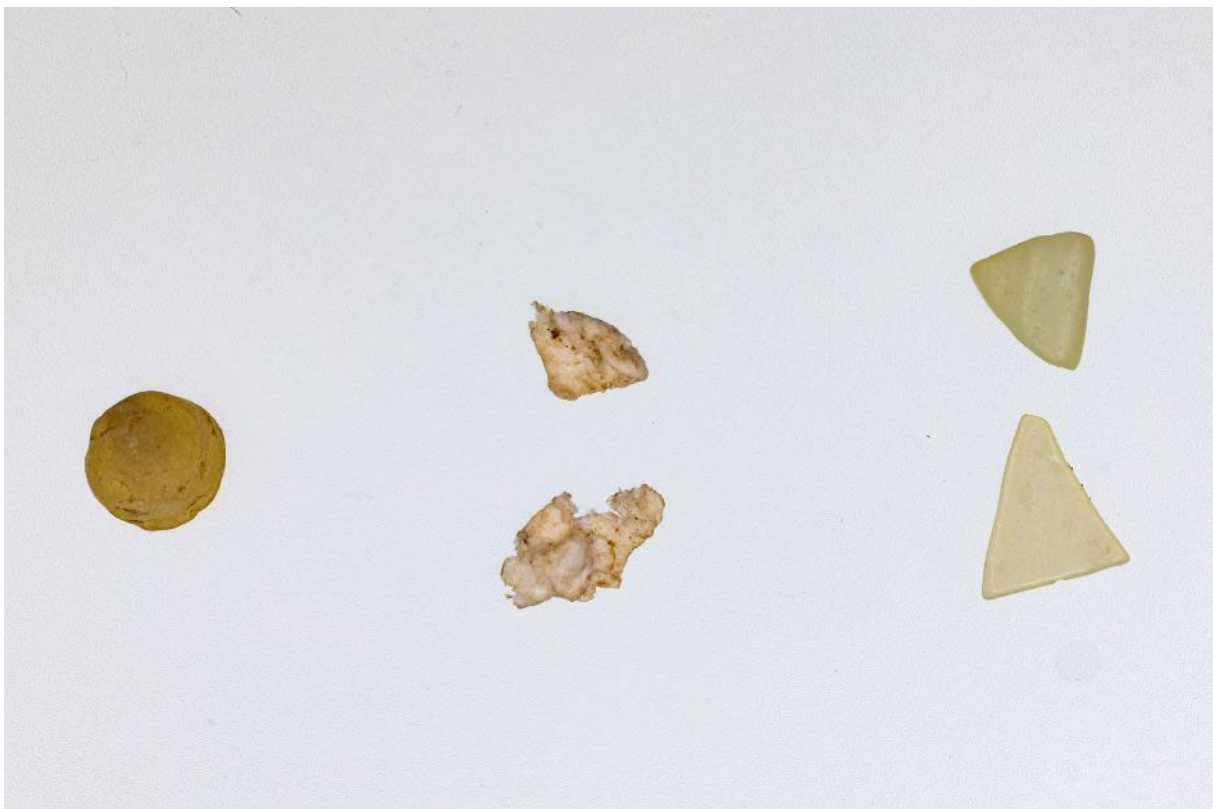
**Nr: NET-2021-005**

<b>JAFCODE</b>	NET-2021-005
Country	Netherlands
Location	Schiermonnikoog
Date	10-Apr-2021
Finder	Jannes Heusinkveld; Carlijn Lammers
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	31
Total mass of plastic in stomach (g)	0.2594



# Nr: NET-2021-006

<b>JAFCODE</b>	NET-2021-006
Country	Netherlands
Location	Schiermonnikoog
Date	10-Apr-2021
Finder	Jannes Heusinkveld; Carlijn Lammers
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for unknown reason)	CEM
Notes from dissection	massive constipation prior to CEM; entire gut filled with faecal matter and swollen. CEM and GUT sampled separately
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	4
Total mass of plastic in stomach (g)	0.0281





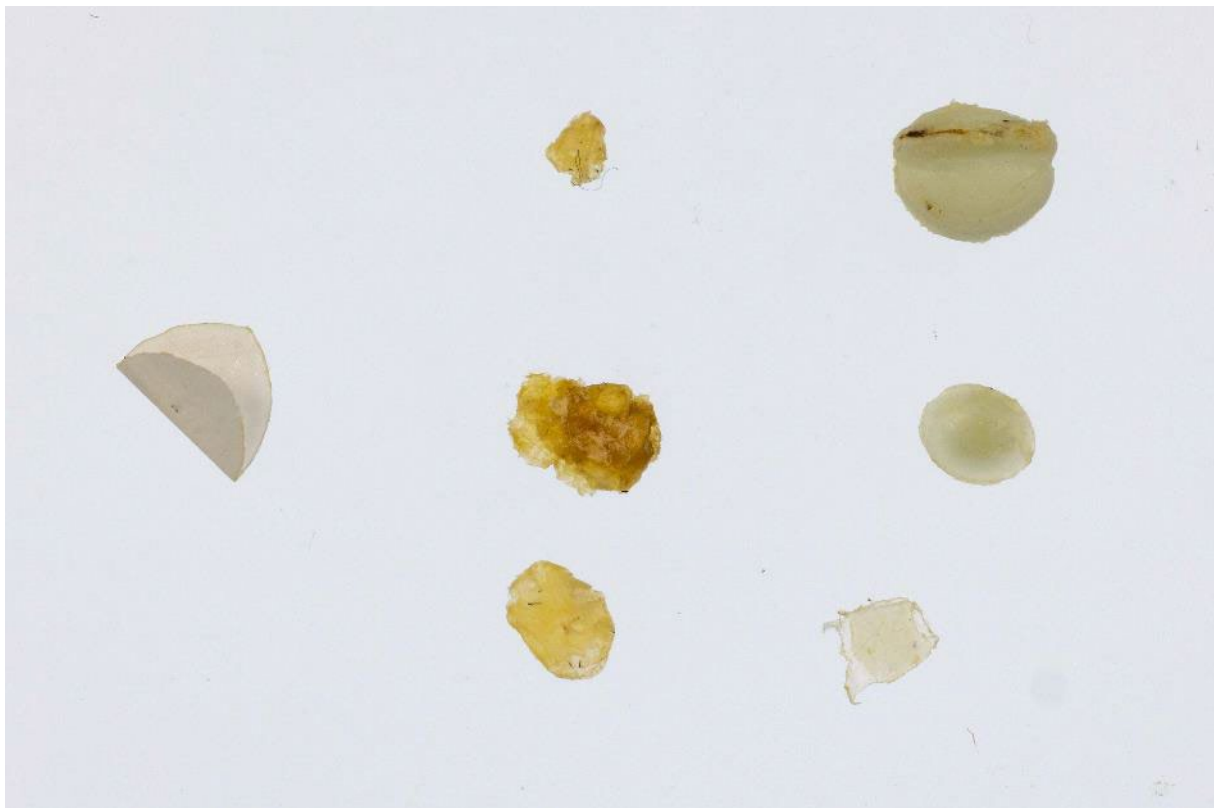
Nr: **NET-2021-007**

<b>JAFCODE</b>	NET-2021-007
Country	Netherlands
Location	Texel Paal 28
Date	8-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	<i>coloured:uncertain whether L or D or DD</i>
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	<i>right leg missing; heavily scavenged</i>
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	7
Total mass of plastic in stomach (g)	0.0207

In addition to plastics  
one large coal like particle



Plastics (one sheet, 3 foams, 3 fragments)



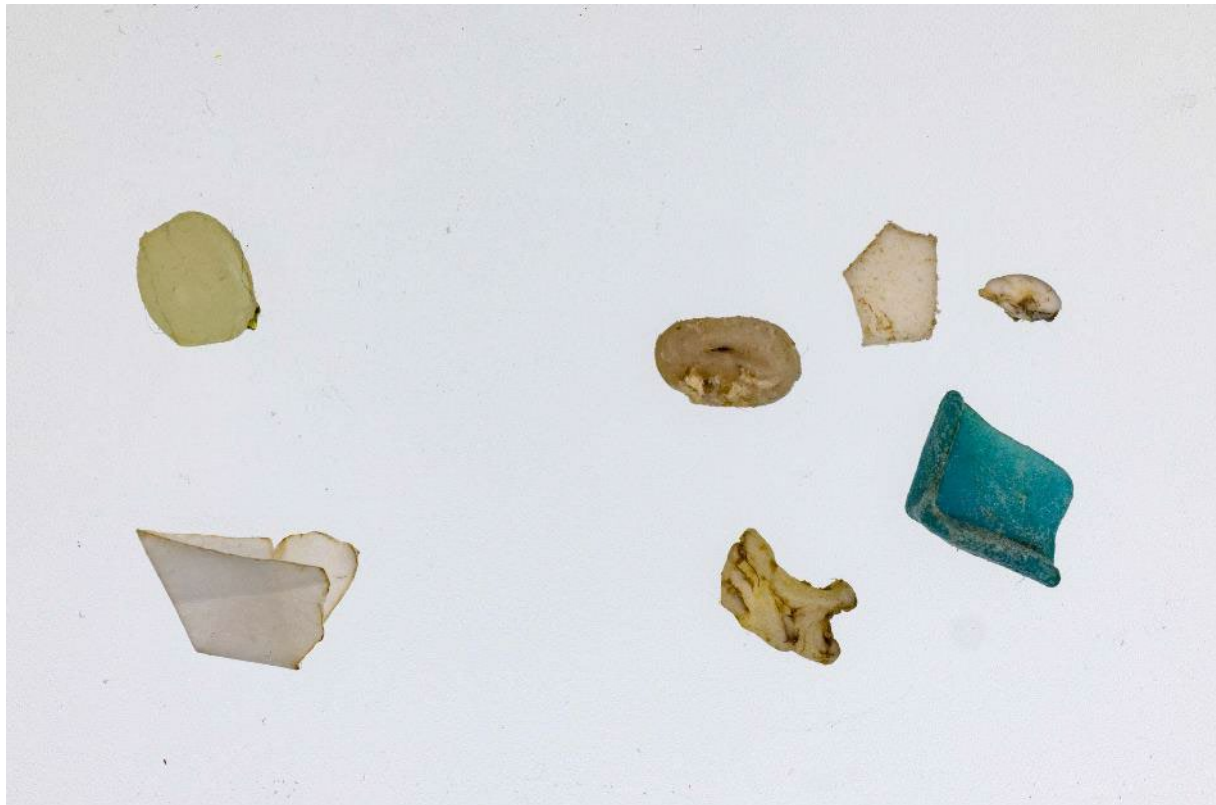
**Nr: NET-2021-008**

<b>JAFCODE</b>	NET-2021-008
Country	Netherlands
Location	Texel Paal 26
Date	8-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	heavily scavenged; No gizzard present, only damaged proventriculus remained, mostly filled with soft paraffine like mud/fluid
nr of industrial plastic pellets	Incomplete data (one pellet in proventriculus)
nr of consumer debris plastic particles	Incomplete data (one sheet in proventriculus)
Total mass of plastic in stomach (g)	Incomplete data (five fragments in proventr.)



**NB INCOMPLETE STOMACH,  
NO GIZZARD PRESENT (only damaged proventriculus)  
PLASTIC DATA NOT USED FOR MONITORING**

Plastics on photo are the incomplete remains from the proventriculus



**Nr: NET-2021-009**

<b>JAFCODE</b>	NET-2021-009
Country	Netherlands
Location	Texel Paal 25
Date	8-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	6
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	8
Total mass of plastic in stomach (g)	0.3916



**Nr: NET-2021-010**

<b>JAFCODE</b>	NET-2021-010
Country	Netherlands
Location	Schiermonnikoog Noordstrand
Date	12-Apr-2021
Finder	FaunaVisie Pim Lollinga
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	15
Total mass of plastic in stomach (g)	0.1374



**Nr: NET-2021-011**

<b>JAFCODE</b>	<a href="#">NET-2021-011</a>
Country	<a href="#">Netherlands</a>
Location	<a href="#">Schiermonnikoog Noordstrand</a>
Date	<a href="#">12-Apr-2021</a>
Finder	<a href="#">FaunaVisie Pim Lollinga</a>
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	20
Total mass of plastic in stomach (g)	0.2834



**Nr: NET-2021-012**

<b>JAFCODE</b>	NET-2021-012
Country	Netherlands
Location	Schiermonnikoog Noordstrand
Date	12-Apr-2021
Finder	FaunaVisie Pim Lollinga
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	24
Total mass of plastic in stomach (g)	0.1748



**Nr: NET-2020-013**

<b>JAFCODE</b>	<a href="#">NET-2021-013</a>
Country	<a href="#">Netherlands</a>
Location	<a href="#">Schiermonnikoog Noordstrand</a>
Date	<a href="#">12-Apr-2021</a>
Finder	<a href="#">FaunaVisie Pim Lollinga</a>
Sex (Male, Female or UNKnown)	<a href="#">F</a>
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	<a href="#">IM</a>
Colourphase (LL, L, D, DD or UNKnown)	<a href="#">LL</a>
Condition score (0=fully emaciated to 9=excellent condition)	<a href="#">1</a>
Likely cause of death (STA=starvation for emaciated with unknown reason)	<a href="#">STA</a>
Notes from dissection	<a href="#">bill tip damaged; old damage</a>
nr of industrial plastic pellets	<a href="#">2</a>
nr of consumer debris plastic particles	<a href="#">8</a>
Total mass of plastic in stomach (g)	<a href="#">0.115</a>



# Nr: NET-2021-014

<b>JAFCODE</b>	NET-2021-014
Country	Netherlands
Location	Ouddorp
Date	8-Apr-2021
Finder	Cees van Hoven
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	CEM
Notes from dissection	cement cloaca collected
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	33
Total mass of plastic in stomach (g)	0.1821





**Nr: NET-2021-015**

<b>JAFCODE</b>	NET-2021-015
Country	Netherlands
Location	Ouddorp
Date	8-Apr-2021
Finder	Cees van Hoven
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	feather structure damaged both P10 could not be measured
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	9
Total mass of plastic in stomach (g)	0.0714



including rubbish  
a bit of a clay-pellet and rusty piece of metal



**Nr: NET-2021-016**

<b>JAFCODE</b>	NET-2021-016
Country	Netherlands
Location	Ouddorp
Date	8-Apr-2021
Finder	Cees van Hoven
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for emaciated with unknown reason)	ING
Notes from dissection	fatty matter in throat lung (everywhere) and around kidney. Material from different areas and gut sampled. Pics taken
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	36
Total mass of plastic in stomach (g)	0.1925



**Nr: NET-2021-017**

<b>JAFCODE</b>	NET-2021-017
Country	Netherlands
Location	Ouddorp
Date	8-Apr-2021
Finder	Cees van Hoven
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	left tail pulled out?
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	59
Total mass of plastic in stomach (g)	0.3817



# Nr: NET-2021-018

<b>JAFCODE</b>	NET-2021-018
Country	Netherlands
Location	Ouddorp
Date	9-Apr-2021
Finder	Cees van Hoven
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	COL
Notes from dissection	neck and ribs broken; kidney and some muscle tissue smashed
nr of industrial plastic pellets	38
nr of consumer debris plastic particles	217
Total mass of plastic in stomach (g)	1.2565



**Nr: NET-2021-019**

<b>JAFCODE</b>	NET-2021-019
Country	Netherlands
Location	Ouddorp
Date	9-Apr-2021
Finder	Cees van Hoven
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	IM
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	14
Total mass of plastic in stomach (g)	0.097



**Nr: NET-2021-020**

<b>JAFCODE</b>	<b>NET-2021-020</b>
Country	Netherlands
Location	Texel paal 18
Date	8-Apr-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	IM
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	28
Total mass of plastic in stomach (g)	0.2516



**Nr: NET-2021-021**

<b>JAFCODE</b>	<b>NET-2021-021</b>
Country	Netherlands
Location	Breskens
Date	9-Apr-2021
Finder	Jaap vd Hiele
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	3
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	46
Total mass of plastic in stomach (g)	0.4114



# Nr: NET-2021-022

<b>JAFCODE</b>	NET-2021-022
Country	Netherlands
Location	Texel Paal 8
Date	28-Mar-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	down ok on breast but bad on belly
nr of industrial plastic pellets	9
nr of consumer debris plastic particles	30
Total mass of plastic in stomach (g)	0.6227





**Nr: NET-2021-023**

<b>JAFCODE</b>	NET-2021-023
Country	Netherlands
Location	Texel Mokbaai close to Ferry harbour
Date	1-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	L
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	tiny bit of oil on left wing (hand)
nr of industrial plastic pellets	5
nr of consumer debris plastic particles	3
Total mass of plastic in stomach (g)	0.1644



Including rubbish:  
part of a clay-pellet and an old paint-chip



# Nr: NET-2021-024

<b>JAFCODE</b>	NET-2021-024
Country	Netherlands
Location	Texel Paal 23
Date	8-Apr-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	18
Total mass of plastic in stomach (g)	0.2263



**Nr: NET-2021-025**

<b>JAFCODE</b>	NET-2021-025
Country	Netherlands
Location	Texel Paal 14
Date	21-Mar-2021
Finder	Jarco Havermans; Ecomare
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	5
Total mass of plastic in stomach (g)	0.7087



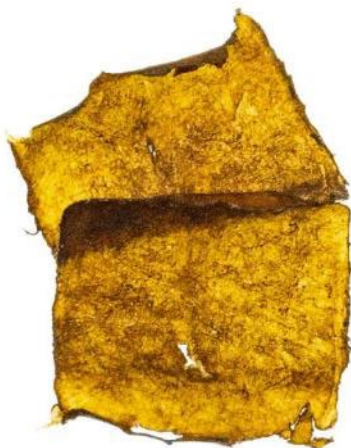
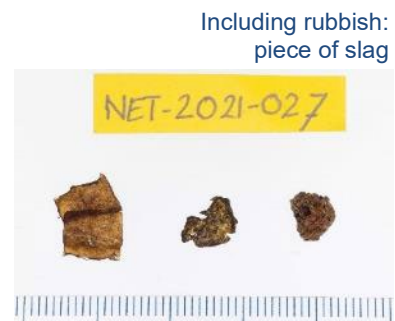
**Nr: NET-2021-026**

<b>JAFCODE</b>	NET-2021-026
Country	Netherlands
Location	Kijkduin Strand
Date	7-Apr-2021
Finder	Dierenambulance De Wulp
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	died same day; force-fed (sonde); likely spat some plastics. Body kept for mounting (Summa College Eindhoven)
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	19
Total mass of plastic in stomach (g)	0.1701



**Nr: NET-2021-027**

<b>JAFCODE</b>	NET-2021-027
Country	Netherlands
Location	Noordwijk
Date	22-Mar-2021
Finder	Arnout de Vries
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	2
Total mass of plastic in stomach (g)	0.0261



**Nr: NET-2021-028**

<b>JAFCODE</b>	NET-2021-028
Country	Netherlands
Location	Texel Paal 22
Date	6-Apr-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	0
Total mass of plastic in stomach (g)	0

**In order to avoid misunderstanding:**

**fulmar corpses that contain a complete stomach but that do not contain any plastic, are equally important to the monitoring scheme as stomachs that do contain plastics!**

One piece of rubbish  
paint chip



**Nr: NET-2021-029**

<b>JAFCODE</b>	NET-2021-029
Country	Netherlands
Location	Texel Paal 16
Date	13-Mar-2021
Finder	Job ten Horn en Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	5
nr of consumer debris plastic particles	66
Total mass of plastic in stomach (g)	0.4958



# Nr: NET-2021-030

<b>JAFCODE</b>	NET-2021-030
Country	Netherlands
Location	Monster Rijnweg
Date	5-Apr-2021
Finder	Dierenambulance De Wulp
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	COL
Notes from dissection	immediately euthanized; internal bleeding and broken leg collision likely. Body kept for mounting
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	25
Total mass of plastic in stomach (g)	0.2531





**Nr: NET-2021-031**

<b>JAFCODE</b>	<b>NET-2021-031</b>
Country	Netherlands
Location	Texel Paal 26
Date	14-Mar-2021
Finder	Martin Baptist
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	IM
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	skull collected for Martins daughter
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	158
Total mass of plastic in stomach (g)	0.2



**Nr: NET-2021-032**

<b>JAFCODE</b>	NET-2021-032
Country	Netherlands
Location	Ouddorp
Date	7-Apr-2021
Finder	Ad van den Berge
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	left wing has only 9 primaries but both wings measure 331mm
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	15
Total mass of plastic in stomach (g)	0.4146



**Nr: NET-2021-033**

<b>JAFCODE</b>	<b>NET-2021-033</b>
Country	Netherlands
Location	Ouddorp
Date	7-Apr-2021
Finder	Ad van den Berge
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	IM
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	5
Likely cause of death (STA=starvation for emaciated with unknown reason)	ING
Notes from dissection	lots of paraffin-like material in mouth and stomach. Gut sampled. Poor down on breast and belly
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	56
Total mass of plastic in stomach (g)	0.4739



**Nr: NET-2021-034**

<b>JAFCODE</b>	NET-2021-034
Country	Netherlands
Location	Ouddorp
Date	7-Apr-2021
Finder	Ad van den Berge
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	5
Likely cause of death (STA=starvation for emaciated with unknown reason)	ING
Notes from dissection	lots of paraffin-like material in mouth and stomach. Gut sampled
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	10
Total mass of plastic in stomach (g)	0.2379



**Nr: NET-2021-035**

<b>JAFCODE</b>	NET-2021-035
Country	Netherlands
Location	Oostkapelle
Date	8-Apr-2021
Finder	Jaap vd Hiele - Aseal
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	6
nr of consumer debris plastic particles	36
Total mass of plastic in stomach (g)	0.5775



# Nr: NET-2021-036

<b>JAFCODE</b>	NET-2021-036
Country	Netherlands
Location	Texel Steiger Vriendschap
Date	11-Apr-2021
Finder	Jan van Franeker en Yvonne Hermes
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	D
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	55
Total mass of plastic in stomach (g)	0.6686



including one piece of rubbish  
a small piece of slag

Note the polypropylene marked fragment  
PP polymer type 5



**Nr: NET-2021-037**

<b>JAFCODE</b>	NET-2021-037
Country	Netherlands
Location	Voornes Duin; Groene Punt
Date	8-Apr-2021
Finder	Ad van den Berge
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	body kept for mounting
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	29
Total mass of plastic in stomach (g)	0.1704



**Nr: NET-2021-038**

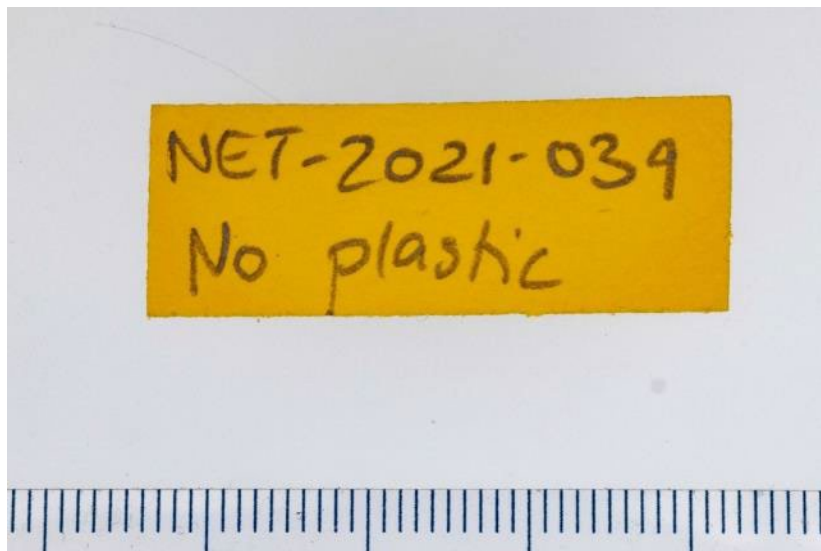
<b>JAFCODE</b>	NET-2021-038
Country	Netherlands
Location	Voornes Duin; Groene Punt
Date	8-Apr-2021
Finder	Ad van den Berge
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	body kept for mounting
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	30
Total mass of plastic in stomach (g)	0.2111





**Nr: NET-2021-039**

<b>JAFCODE</b>	NET-2021-039
Country	Netherlands
Location	Texel Schorren Noord
Date	25-Apr-2021
Finder	Mardik Leopold
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	head and legs missing (postmortem); heavily decayed
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	0
Total mass of plastic in stomach (g)	0



**In order to avoid misunderstanding:**  
**fulmar corpses that contain a complete stomach but that do not contain any plastic, are equally important to the monitoring scheme as stomachs that do contain plastics!**

**Nr: NET-2021-040**

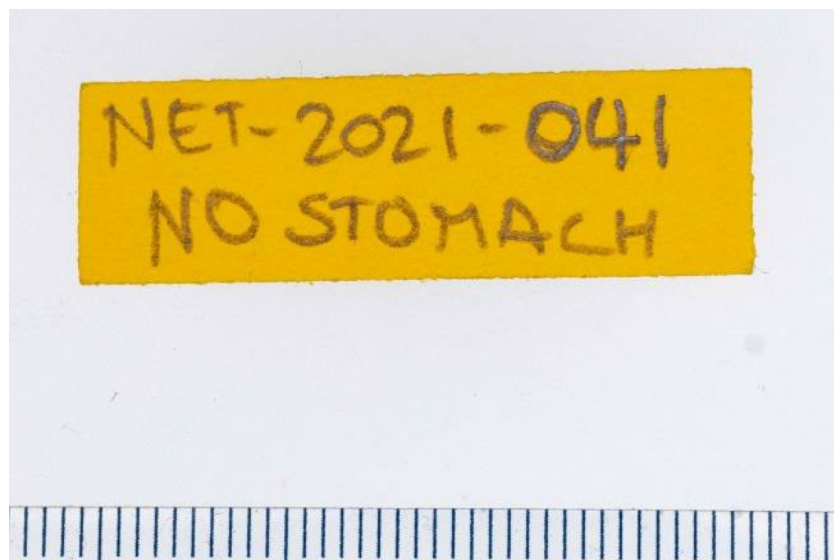
<b>JAFCODE</b>	NET-2021-040
Country	Netherlands
Location	Texel Paal 18.5
Date	22-Apr-2021
Finder	Theo Ruppert; collected by SKU
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	27
Total mass of plastic in stomach (g)	0.0902



Nr: **NET-2021-041**

<b>JAFCODE</b>	NET-2021-041
Country	Netherlands
Location	Texel NIOZ strand
Date	28-Apr-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	small spot oil on breast; seems like 10 tailfeathers but not sure; heavily scavenged - NO STOMACH
nr of industrial plastic pellets	
nr of consumer debris plastic particles	
Total mass of plastic in stomach (g)	

**NO STOMACH PRESENT**, so this bird could not be used for the plastic monitoring program. However, **please remember** that we ask you to also collect older decayed damaged corpses, as often these may still contain a stomach that contributes to our dataset. We prefer to occasionally receive birds without a stomach, rather than leaving potentially valuable material on the beach. Only leave fulmar corpses at the beach when you are absolutely sure that the full interior has been scavenged.



**Nr: NET-2021-042**

<b>JAFCODE</b>	NET-2021-042
Country	Netherlands
Location	Texel Paal 23
Date	25-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	45
Total mass of plastic in stomach (g)	0.2484



**Nr: NET-2021-043**

<b>JAFCODE</b>	<b>NET-2021-043</b>
Country	Netherlands
Location	Texel Paal 17
Date	25-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	L
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	33
Total mass of plastic in stomach (g)	0.6518



**Nr: NET-2021-044**

<b>JAFCODE</b>	<b>NET-2021-044</b>
Country	Netherlands
Location	Texel Paal 22
Date	25-Apr-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	27
Total mass of plastic in stomach (g)	0.6161



**Nr: NET-2021-045**

<b>JAFCODE</b>	NET-2021-045
Country	Netherlands
Location	Texel Paal 16
Date	5-May-2021
Finder	Robert Keizer; collected by SKU and JtH
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	PLU
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	13
Total mass of plastic in stomach (g)	0.1267



**Nr: NET-2021-046**

<b>JAFCODE</b>	NET-2021-046
Country	Netherlands
Location	Texel Paal 33
Date	20-Apr-2021
Finder	Ronald Oortwijn; collected by JAF
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	0
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	43
Total mass of plastic in stomach (g)	0.0779





**Nr: NET-2021-047**

<b>JAFCODE</b>	NET-2021-047
Country	Netherlands
Location	Ameland Km 17
Date	29-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	2
nr of consumer debris plastic particles	30
Total mass of plastic in stomach (g)	0.1584



# Nr: NET-2021-048

<b>JAFCODE</b>	NET-2021-048
Country	Netherlands
Location	Ameland Km 18
Date	29-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	35
Total mass of plastic in stomach (g)	0.3699



**Nr: NET-2021-049**

<b>JAFCODE</b>	NET-2021-049
Country	Netherlands
Location	Petten Km 19
Date	6-May-2021
Finder	Arnold Gronert
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	full plastic stomach on video JAF
nr of industrial plastic pellets	13
nr of consumer debris plastic particles	431
Total mass of plastic in stomach (g)	3.4082



# Nr: NET-2021-050

<b>JAFCODE</b>	NET-2021-050
Country	Netherlands
Location	Texel Paal 14
Date	9-May-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	5
nr of consumer debris plastic particles	38
Total mass of plastic in stomach (g)	0.754



On the far right somet rubbish:  
possibly from a filter?



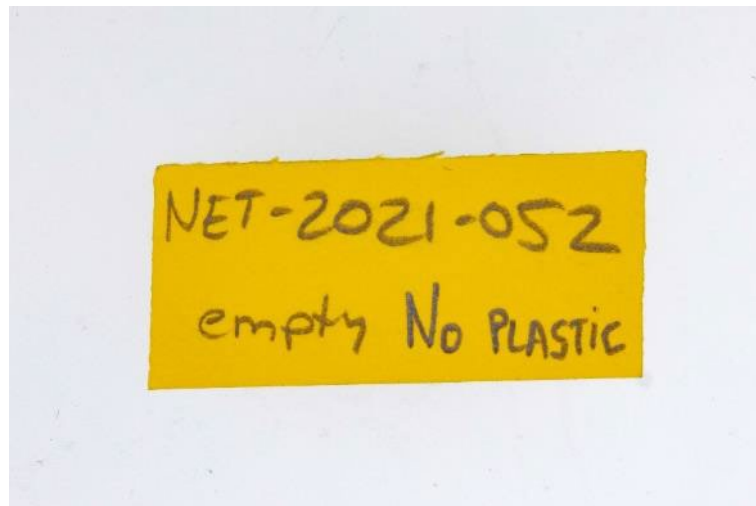
**Nr: NET-2021-051**

<b>JAFCODE</b>	NET-2021-051
Country	Netherlands
Location	Ameland Km 20.6
Date	3-May-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	10
nr of consumer debris plastic particles	66
Total mass of plastic in stomach (g)	0.7758



**Nr: NET-2021-052**

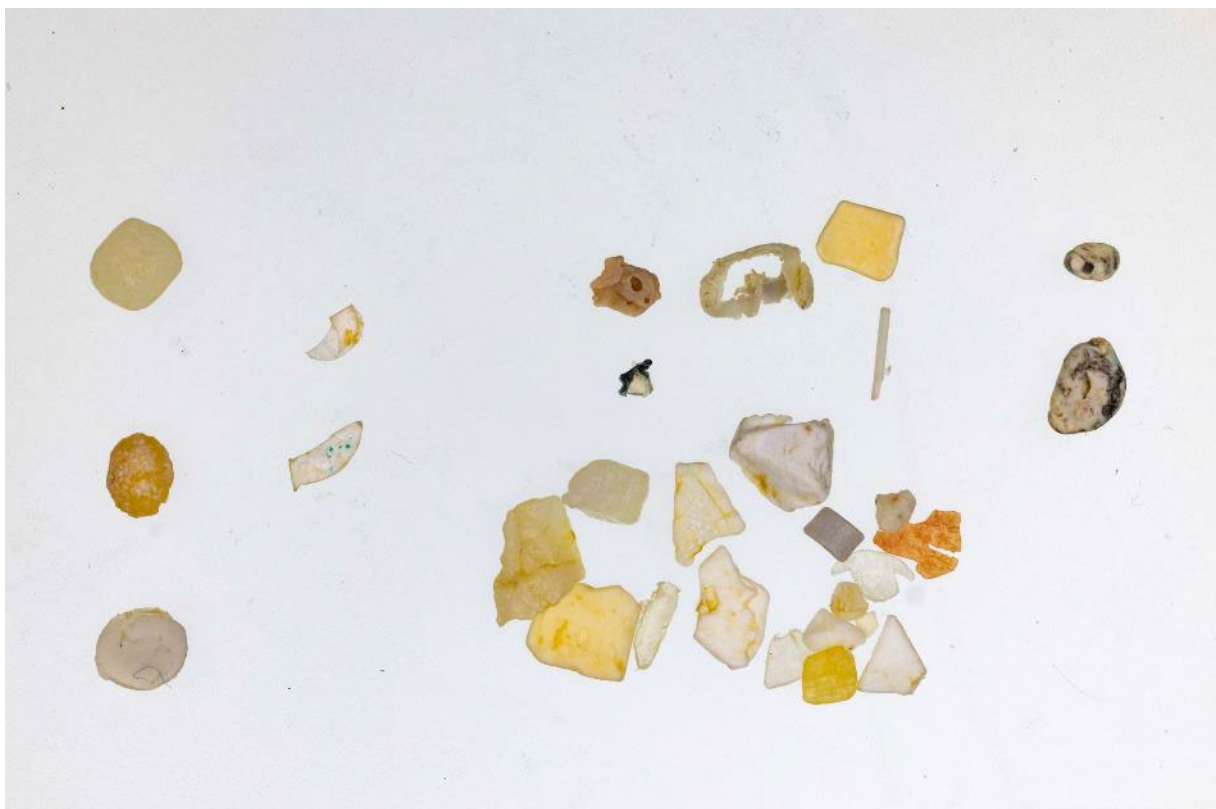
<b>JAFCODE</b>	NET-2021-052
Country	Netherlands
Location	Ameland Km 20.6
Date	3-May-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	L
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	dark red lung but no other death cause indications
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	0
Total mass of plastic in stomach (g)	0

**In order to avoid misunderstanding:**

**fulmar corpses that contain a complete stomach but that do not contain any plastic, are equally important to the monitoring scheme as stomachs that do contain plastics!**

**Nr: NET-2021-053**

<b>JAFCODE</b>	NET-2021-053
Country	Netherlands
Location	Ameland Strandopgang Oerd
Date	14-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	3
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	skin to Natuurhistorisch Museum Rotterdam (NMR) W. Beekhuizen, curator
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	27
Total mass of plastic in stomach (g)	0.1594



**Nr: NET-2021-054**

<b>JAFCODE</b>	NET-2021-054
Country	Netherlands
Location	Engelsmansplaat
Date	10-May-2021
Finder	Arjen Dijkstra
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	7
Total mass of plastic in stomach (g)	0.0431

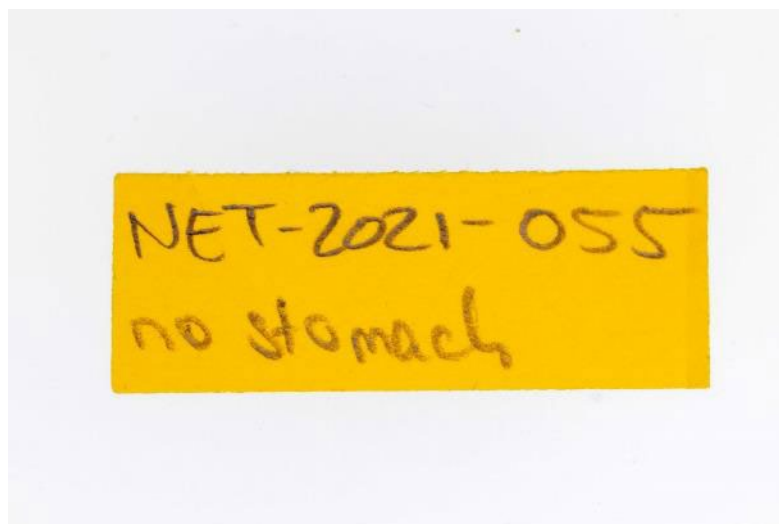




**Nr: NET-2021-055**

<b>JAFCODE</b>	NET-2021-055
Country	Netherlands
Location	Ameland Km 3
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	PLU
Notes from dissection	arrested moult late tail feather score 2 and extreme wear of secondaries; heavily scavenged - NO STOMACH
nr of industrial plastic pellets	
nr of consumer debris plastic particles	
Total mass of plastic in stomach (g)	

**NO STOMACH PRESENT**, so this bird could not be used for the plastic monitoring program. However, **please remember** that we ask you to also collect older decayed damaged corpses, as often these may still contain a stomach that contributes to our dataset. We prefer to occasionally receive birds without a stomach, rather than leaving potentially valuable material on the beach. Only leave fulmar corpses at the beach when you are absolutely sure that the full interior has been scavenged.



# Nr: NET-2021-056

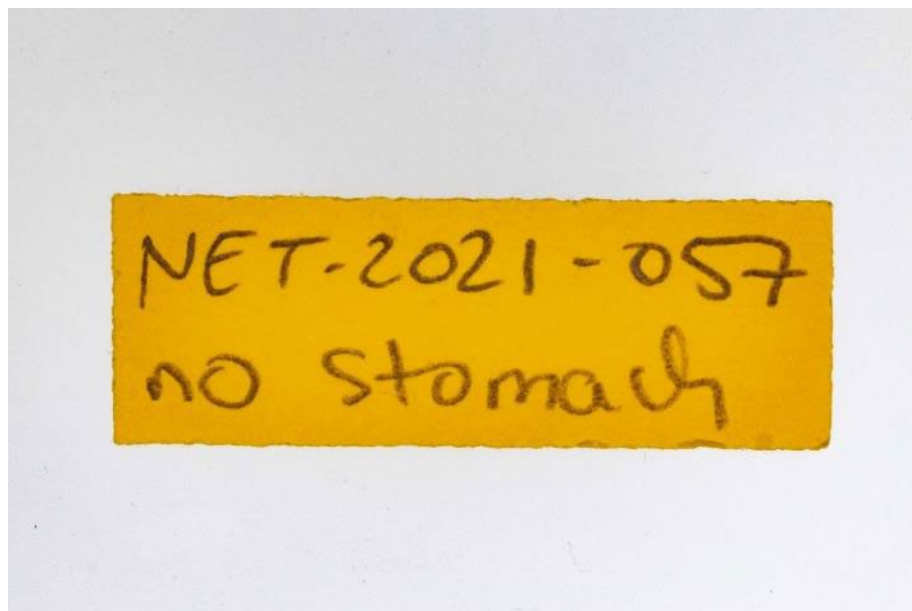
<b>JAFCODE</b>	NET-2021-056
Country	Netherlands
Location	Ameland Km 4
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	D
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	poor down on breast; skin to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	6
nr of consumer debris plastic particles	54
Total mass of plastic in stomach (g)	0.5421



Nr: **NET-2021-057**

<b>JAFCODE</b>	NET-2021-057
Country	Netherlands
Location	Ameland Km 5
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	right wing 9 primaries only 324mm; heavily scavenged - NO STOMACH
nr of industrial plastic pellets	
nr of consumer debris plastic particles	
Total mass of plastic in stomach (g)	

**NO STOMACH PRESENT**, so this bird could not be used for the plastic monitoring program. However, **please remember** that we ask you to also collect older decayed damaged corpses, as often these may still contain a stomach that contributes to our dataset. We prefer to occasionally receive birds without a stomach, rather than leaving potentially valuable material on the beach. Only leave fulmar corpses at the beach when you are absolutely sure that the full interior has been scavenged.



**Nr: NET-2021-058**

<b>JAFCODE</b>	NET-2021-058
Country	Netherlands
Location	Ameland Km 6
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	2Y
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	20
Total mass of plastic in stomach (g)	0.0894



**Nr: NET-2021-059**

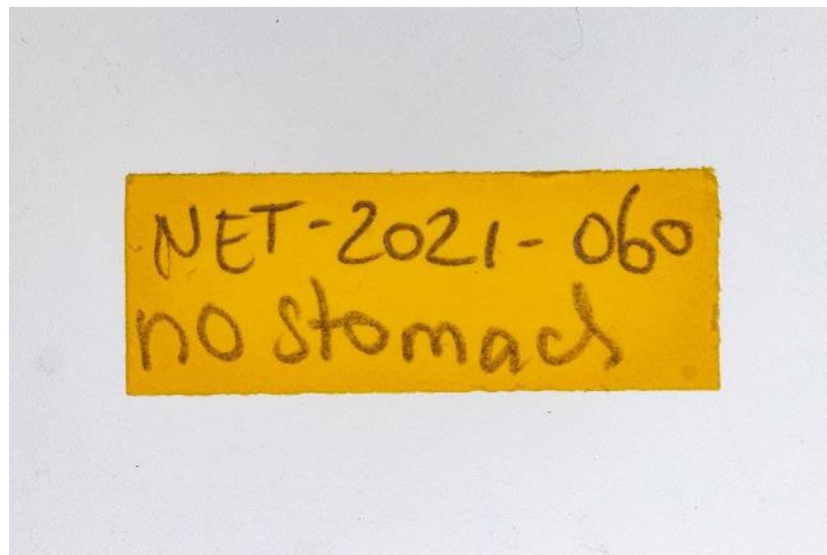
<b>JAFCODE</b>	NET-2021-059
Country	Netherlands
Location	Ameland Km 7
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	poor down on breast; skin to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	7
Total mass of plastic in stomach (g)	0.1267



# Nr: NET-2021-060

<b>JAFCODE</b>	NET-2021-060
Country	Netherlands
Location	Ameland Km 9
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	heavily scavenged - NO STOMACH
nr of industrial plastic pellets	
nr of consumer debris plastic particles	
Total mass of plastic in stomach (g)	

**NO STOMACH PRESENT**, so this bird could not be used for the plastic monitoring program. However, **please remember** that we ask you to also collect older decayed damaged corpses, as often these may still contain a stomach that contributes to our dataset. We prefer to occasionally receive birds without a stomach, rather than leaving potentially valuable material on the beach. Only leave fulmar corpses at the beach when you are absolutely sure that the full interior has been scavenged.



**Nr: NET-2021-061**

<b>JAFCODE</b>	NET-2021-061
Country	Netherlands
Location	Ameland Km 18.8
Date	11-May-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	GUT
Notes from dissection	Big inflammation on testis? As likely consequence heavily obstipated
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	47
Total mass of plastic in stomach (g)	0.2985



**Nr: NET-2021-062**

<b>JAFCODE</b>	NET-2021-062
Country	Netherlands
Location	Ameland Km 13
Date	21-Apr-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	CEM
Notes from dissection	Cementcloaca 31x25mm - collected
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	9
Total mass of plastic in stomach (g)	0.0863





**Nr: NET-2021-063**

<b>JAFCODE</b>	NET-2021-063
Country	Netherlands
Location	Ameland Km 10
Date	10-May-2021
Finder	Johan Krol
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	DD
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	GUT
Notes from dissection	Oviduct has several cheeselike inflammations; skin to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	2
Total mass of plastic in stomach (g)	0.0032



**Nr: NET-2021-064**

<b>JAFCODE</b>	NET-2021-064
Country	Netherlands
Location	Texel Paal 22
Date	5-May-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	9
Total mass of plastic in stomach (g)	0.1528



**Nr: NET-2021-065**

<b>JAFCODE</b>	NET-2021-065
Country	Netherlands
Location	Texel Paal 21.5
Date	8-May-2021
Finder	Robert Keizer; collected by SKU
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	put on waarneming.nl on 7May2021. Lung scavenged
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	27
Total mass of plastic in stomach (g)	0.1498



The glass jar contains a piece of rubbery material that decayed to a slimy mass after defrosting and exposure to air



**Nr: NET-2021-066**

<b>JAFCODE</b>	NET-2021-066
Country	Netherlands
Location	Texel Paal 19
Date	8-May-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	96
Total mass of plastic in stomach (g)	0.3046



**Nr: NET-2021-067**

<b>JAFCODE</b>	NET-2021-067
Country	Netherlands
Location	Texel Paal 20
Date	8-May-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	skeleton to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	3
nr of consumer debris plastic particles	27
Total mass of plastic in stomach (g)	0.4522



**Nr: NET-2021-067 continued:**

**Chemical waste, example**

Besides the plastic illustrated on the previous page, the stomach of fulmar NET-2020-067 contained several lumps of paraffin like material ( $\pm 1.3\text{g}$ ) and 4 blackish slags ( $\pm 0.08\text{g}$ ). Paraffin like material is found quite regularly, for details see the data report for 2021



**Nr: NET-2021-068**

<b>JAFCODE</b>	NET-2021-068
Country	Netherlands
Location	Hondsbosche Zeewering Km 25
Date	7-May-2021
Finder	Arnold Gronert
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	15
Total mass of plastic in stomach (g)	0.3937



**Nr: NET-2021-069**

<b>JAFCODE</b>	NET-2021-069
Country	Netherlands
Location	Texel Paal 12
Date	9-May-2021
Finder	Suse Kühn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	IM
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	1
Total mass of plastic in stomach (g)	0.1263





**Nr: NET-2021-070**

<b>JAFCODE</b>	NET-2021-070
Country	Netherlands
Location	Texel Den Burg Georgiëweg nabij Sligro
Date	25-Apr-2021
Finder	Job Schepers
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	2
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	Remarkable moult pattern near tertials (photographed) skeleton to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	28
Total mass of plastic in stomach (g)	0.2351



**Nr: NET-2021-071**

<b>JAFCODE</b>	NET-2021-071
Country	Netherlands
Location	Ameland Beach
Date	18-Jul-2021
Finder	Jan de Jong
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	CAN
Notes from dissection	incubation patch recovering with down; big cancer where oesophagus is grown into surrounding tissue
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	12
Total mass of plastic in stomach (g)	0.5145



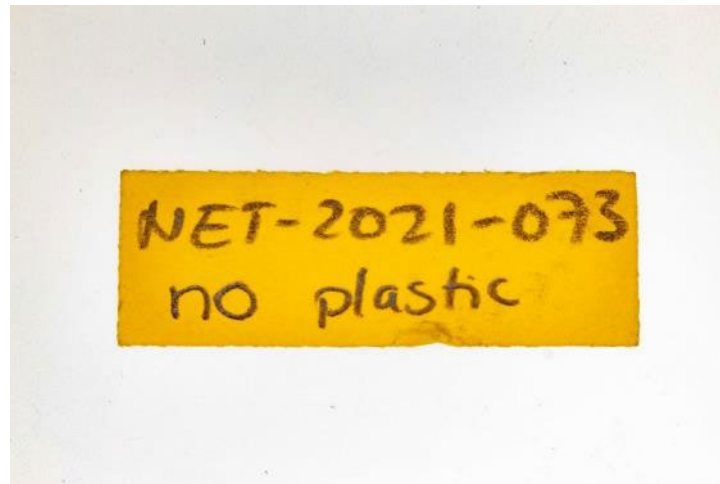
**Nr: NET-2021-072**

<b>JAFCODE</b>	NET-2021-072
Country	Netherlands
Location	Ameland Beach
Date	18-Jul-2021
Finder	Jan de Jong
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	3
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	6
Total mass of plastic in stomach (g)	0.0356



**Nr: NET-2021-073**

<b>JAFCODE</b>	NET-2021-073
Country	Netherlands
Location	Texel paal 12
Date	2-Aug-2021
Finder	Maarten Brugge
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	3
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	X
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	0
Total mass of plastic in stomach (g)	0

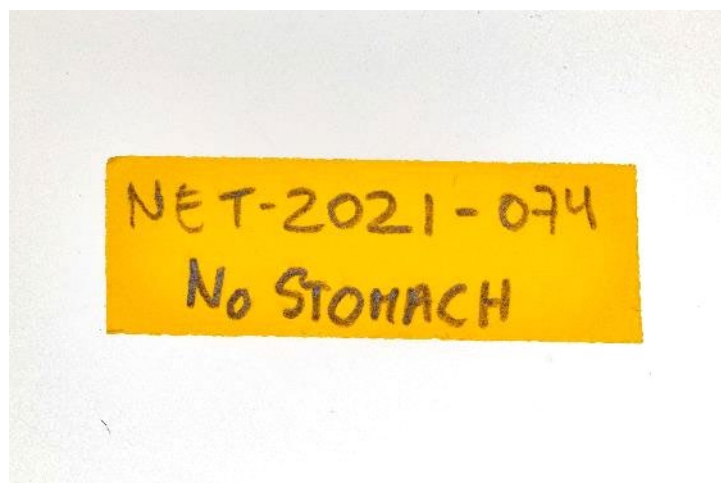
**In order to avoid misunderstanding:**

**fulmar corpses that contain a complete stomach but that do not contain any plastic, are equally important to the monitoring scheme as stomachs that do contain plastics!**

Nr: **NET-2021-074**

<b>JAFCODE</b>	NET-2021-074
Country	Netherlands
Location	Texel paal 18.5
Date	5-Dec-2021
Finder	Mardik & Kyra Leopold; Timo Roskam
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	completely scavenged from back; damaged foot but that is an old wound
nr of industrial plastic pellets	
nr of consumer debris plastic particles	
Total mass of plastic in stomach (g)	

**NO STOMACH PRESENT**, so this bird could not be used for the plastic monitoring program. However, **please remember** that we ask you to also collect older decayed damaged corpses, as often these may still contain a stomach that contributes to our dataset. We prefer to occasionally receive birds without a stomach, rather than leaving potentially valuable material on the beach. Only leave fulmar corpses at the beach when you are absolutely sure that the full interior has been scavenged.



# Nr: NET-2021-075

<b>JAFCODE</b>	NET-2021-075
Country	Netherlands
Location	Texel paal 17
Date	22-Oct-2021
Finder	Ecomare
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	has been in rehab for 1 day; skeleton to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	18
Total mass of plastic in stomach (g)	0.0297



# Nr: NET-2021-076

<b>JAFCODE</b>	NET-2021-076
Country	Netherlands
Location	Vlieland nabij Pad van 20 (?)
Date	23-Apr-2021
Finder	Carl Zuhorn
Sex (Male, Female or UNKnown)	M
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	small male; sex and size double checked; skeleton to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	7
Total mass of plastic in stomach (g)	0.5459

This stomach contained a large piece of balloon rubber (latex)  
 Latex normally starts to decay after rinsing, probably due to stomach enzymes  
 (see for example rubbery material in NET-2021-065).  
 In this case the material was stored in ethanol for some time  
 And was then dried to firm but rather brittle materials



**Nr: NET-2021-077**

<b>JAFCODE</b>	NET-2021-077
Country	Netherlands
Location	Vlieland nabij Pad van 20 (?)
Date	23-Apr-2021
Finder	Carl Zuhorn
Sex (Male, Female or UNKnown)	F
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	AD
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	GUT
Notes from dissection	heavily constipated; old inflammations inside ribs; skeleton to NMR, W. Beekhuizen, curator
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	4
Total mass of plastic in stomach (g)	0.0286

NET-2021-077

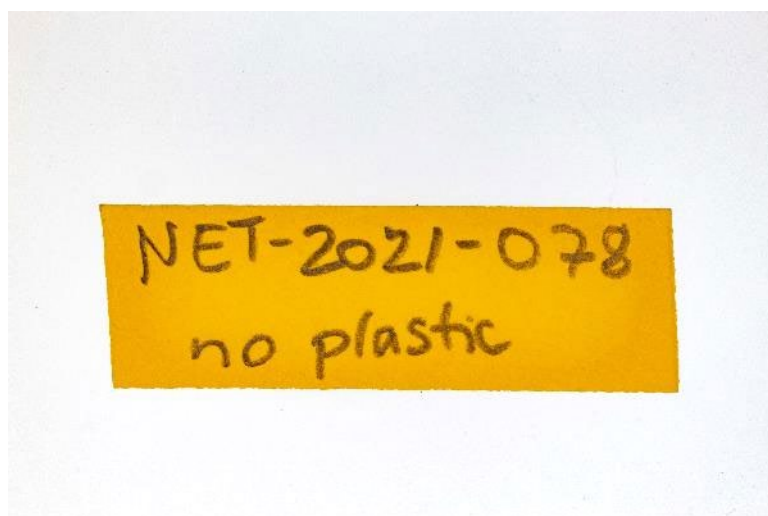




**Nr: NET-2021-078**

<b>JAFCODE</b>	NET-2021-078
Country	Netherlands
Location	unknown (Den Haag)
Date	12-Apr-2021
Finder	De Wulp
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	1
Likely cause of death (STA=starvation for emaciated with unknown reason)	STA
Notes from dissection	Dissected by M. Mensink: She noted: Female; inactive ovarium; moult-infested longs.
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	0
Total mass of plastic in stomach (g)	0

**This bird had been alive in rehabilitation for longer than 3 days (7 days): therefor it is not included in plastic monitoring data.** However, in the long term, we may use birds like this to investigate the rate of degradation of different plastic types in fulmar stomachs



**In order to avoid misunderstanding: fulmar corpses that contain a complete stomach but that do not contain any plastic, are equally important to our research as stomachs that do contain plastics!**

# Nr: NET-2021-079

<b>JAFCODE</b>	NET-2021-079
Country	Netherlands
Location	unknown (Den Haag)
Date	12-Apr-2021
Finder	De Wulp
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	4
Likely cause of death (STA=starvation for emaciated with unknown reason)	PLU
Notes from dissection	arrested moult. Dissected by M. Mensink: Male; creamy testis 5mm; Pulmopathy/nephropathy.
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	3
Total mass of plastic in stomach (g)	0.0618



Included in the photo is one item classified as non plastic rubbish: the rusted remains of a fishing hook (smaller sport fishing type)

**This bird had been alive in rehabilitation for longer than 3 days (12 days): therefor it is not included in plastic monitoring data.** However, in the long term, we may use birds like this to investigate the rate of degradation of different plastic types in fulmar stomachs



**Nr: NET-2021-080**

<b>JAFCODE</b>	NET-2021-080
Country	Netherlands
Location	unknown (Den Haag)
Date	7-Apr-2021
Finder	De Wulp
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	JU
Colourphase (LL, L, D, DD or UNKnown)	LL
Condition score (0=fully emaciated to 9=excellent condition)	6
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	age based on bursa (SKU). Dissected by M.Mensink: male; moult-infested air-sacs.
nr of industrial plastic pellets	1
nr of consumer debris plastic particles	5
Total mass of plastic in stomach (g)	0.4201



**This bird had been alive in rehabilitation for longer than 3 days (15 days): therefor it is not included in plastic monitoring data.** However, in the long term, we may use birds like this to investigate the rate of degradation of different plastic types in fulmar stomachs



Nr: **NET-2021-081**

<b>JAFCODE</b>	NET-2021-081
Country	Netherlands
Location	De Keerhoeve
Date	8-Apr-2021
Finder	De Wulp
Sex (Male, Female or UNKnown)	UNK
Age (JUvenile, 2 <sup>nd</sup> Year, IMmature, ADult, or UNK)	UNK
Colourphase (LL, L, D, DD or UNKnown)	
Condition score (0=fully emaciated to 9=excellent condition)	
Likely cause of death (STA=starvation for emaciated with unknown reason)	UNK
Notes from dissection	Only the stomach was received. Dissected by M. Mensink: She noted: Female; inactive ovarium; nephropathy.
nr of industrial plastic pellets	0
nr of consumer debris plastic particles	1
Total mass of plastic in stomach (g)	0.1052



**This bird had been alive in rehabilitation for longer than 3 days (7 days): therefore it is not included in plastic monitoring data.** However, in the long term, we may use birds like this to investigate the rate of degradation of different plastic types in fulmar stomachs



## **Supplement individual details (acronyms)**

### **Supplement individuele details (afkortingen)**

*The ruler in photo's shows mm and cm scaling*

De lineaal bij de fotos toont mm en cm schaal

#### **CEM = cementcloaca - cementcloaca**

*A blockage in the final part of the intestine by a 'hard' egg-shaped ball formed by accumulation of layer upon layer of hardened faeces and ureum. At some stage this completely blocks defaecation, the parts of the intestine above this fill up with digested mud that can't be excreted.*

Blokkering van de einddarm met een steenachtige meestal eivormig bal van laag op laag opgehoopte uitwerpselen met ureum. Op zeker moment blokkeert dit de volledige 'stoelgang' en de voorliggende darm zwelt op met darmmateriaal.

#### **COL = collision – botsing**

*Collision is used when we observe signs of a mechanical death, e.g. broken bones, or internal heavy bruises. These may be caused by collisions with cables, wires, ship- or lighthouse lights, cliff accidents, and also roadkills. Collision may lead to instant death, but also to a slow starvation in birds being injured and alive, but unable to provide themselves with food.*

Botsing als doodsoorzaak wordt gebruikt wanneer er tekenen zijn van een 'mechanische' doodsoorzaak, zoals gebroken botten of zware inwendige kneuzingen. Dit kan ontstaan door botsing met kabels, draden, verlichting op schepen of vuurtoren, ongelukken op de klif, maar bv ook verkeersslachtoffers. Botsingen kunnen de onmiddellijke doodsoorzaak zijn, maar kunnen ook leiden tot de hongerdood als een dier niet meer in staat is voldoende voedsel te verzamelen.

#### **DRO = drowning – verdrinking**

*This is used when the birds appear healthy, and in good body condition, except for bloodfilled or soaked lungs. These things suggest that the bird may have drowned instantly in surface nets. This could also be on longline hooks but without visible damage from the longline (see below).*

De term DRO wordt gebruikt als de vogel uitwendig en inwendig gezond oogt en in normale conditie is, maar waarbij bloed in longen of gesprongen aderen een aanwijzing zijn dat de vogel verdronken is. Dat kan in netten zijn, maar ook door lange-lijn-visserij maar zonder zichtbare schade van haken of lijnen (zie hieronder).

#### **LLV = long-line victim Lange-lijn slachtoffer**

*A specific case of drowning or entanglement. Evidence showing that the bird drowned from longline hooking or entanglement, where birds are drawn down with the hooked line. This may be indicated by hook damage, often in the bill, or in the arm wing, in combination with good body condition, but e.g. fresh blood in lungs and burst internal veins.*

Dit is een speciaal geval van verdrinking en verstrikking en wordt gebruikt wanneer uit aanwezigheid van haak en lijn, of daarvoor typerende schade aan snavel of lijf duidelijk is dat de vogel is vastgeraakt aan een beaasde haak en mee onder water is getrokken.

#### **GUT = various internal problems diverse inwendige problemen**

*This acronym is used for a range of problems observed during autopsy in the internal parts of the bird. This could be serious inflammations, e.g. in the oviduct of females, or serious kidney problems (granular obstructions); malformations, etc., or combinations of such problems. In the case of heavy cancers, the more specific acronym CAN Cancer is used. In general some details will be given under dissection notes.*

Deze afkorting wordt gebruikt voor een hele reeks inwendig geobserveerde problemen die als waarschijnlijke doodsoorzaak kunnen worden gezien. Dat kunnen zware ontstekingen zijn, bv in het vrouwelijk oviduct, nierfalen (korrelige structuur) misvormingen, etc. In het geval van grote kanker gezwellen wordt CAN Cancer als meer specifieke afkorting gebruikt. Veelal zal onder de dissectie notities wat meer toelichting worden gegeven.

## **PLU = plumage – veerkleed**

*In some cases, birds may have had problems in primary, tail or body feather moult, which has led to such poor plumage that difficulties in flying or water-proofing may be suspected causing excessive energy needs. In other cases, birds seem to suffer from problems with the down feathers, needed for insulation and additional water-proofing. Sometimes down is completely lacking, exposing bare skin immediately below the covers.*

Soms hebben vogels ernstige problemen met de rui van vleugel, staart of lichaamsveren. Dit kan tot een dermate slechte toestand van het verenkleed leiden dat gebrekkig vliegvermogen of waterdichtheid van het verenpak hebben geleid tot extreem energieverbruik en de honger dood. In andere gevallen kan de donslaag onder de dekveren slecht zijn of zelfs ontbreken.

## **OIL = oiling – Olie**

*Mineral oil in plumage is likely to have caused disrupted water-proofing of plumage or toxication.*

Aardolie vervuiling van het verenkleed heeft waarschijnlijk de dood veroorzaakt, door lekkage van de veren of vergiftiging.

## **EXT = other external plumage fouling andere uitwendige vervuiling**

*Substances other than mineral oils, such as vegetable or animal oils, paraffins or complex chemical mixtures may affect birds in similar ways to mineral oil.*

Andere substanties dan olie, bijv plantaardige of dierlijke olie, paraffine en chemische mengsels kunnen het verenkleed aantasten op een vergelijkbare manier als aardolie.

## **ING = ingestion – ingeslikte stoffen**

*Ingestion of materials is suspected to have caused the death of the bird, e.g. excessive amounts of paraffin or palmfat-like substances, but also extreme accumulation of plastics or other litter.*

Het opeten van bepaalde substanties kan soms aangewezen worden als de meest waarschijnlijke doodsoorzaak. Het gaat dan om bijv. extreme hoeveelheden paraffine-achtige of palmolie-achtige stoffen, maar ook om bijv. extreme ophoping van plastics of ander zwerfvuil.

## **STA = starvation – Verhongering**

*The bird died slowly from starvation, but it is unknown what has caused this. It may have been prolonged food shortage, but individual problems that cannot be identified during simple autopsies may also play a role. For example one may think of some diseases, undetected injuries, invisible pollution, poisoning or whatever.*

Deze term wordt gebruikt als de vogel totaal vermagerd is, zonder dat duidelijk is wat dat heeft veroorzaakt. Dat kunnen ernstige voedseltekorten zijn, maar ook niet direct zichtbare ziektes of verwondingen, vervuiling, vergiftiging e.d.

## **UNK = unknown – onbekend**

*Used if we really do not have any clue as to what has caused the death of the bird, which may be the case especially in very old or heavily scavenged corpses.*

Dit wordt gebruikt als geen van de bovenstaande afkortingen bruikbaar is, bijvoorbeeld in het geval van extreem oude of totaal leeggevreten kadavers.