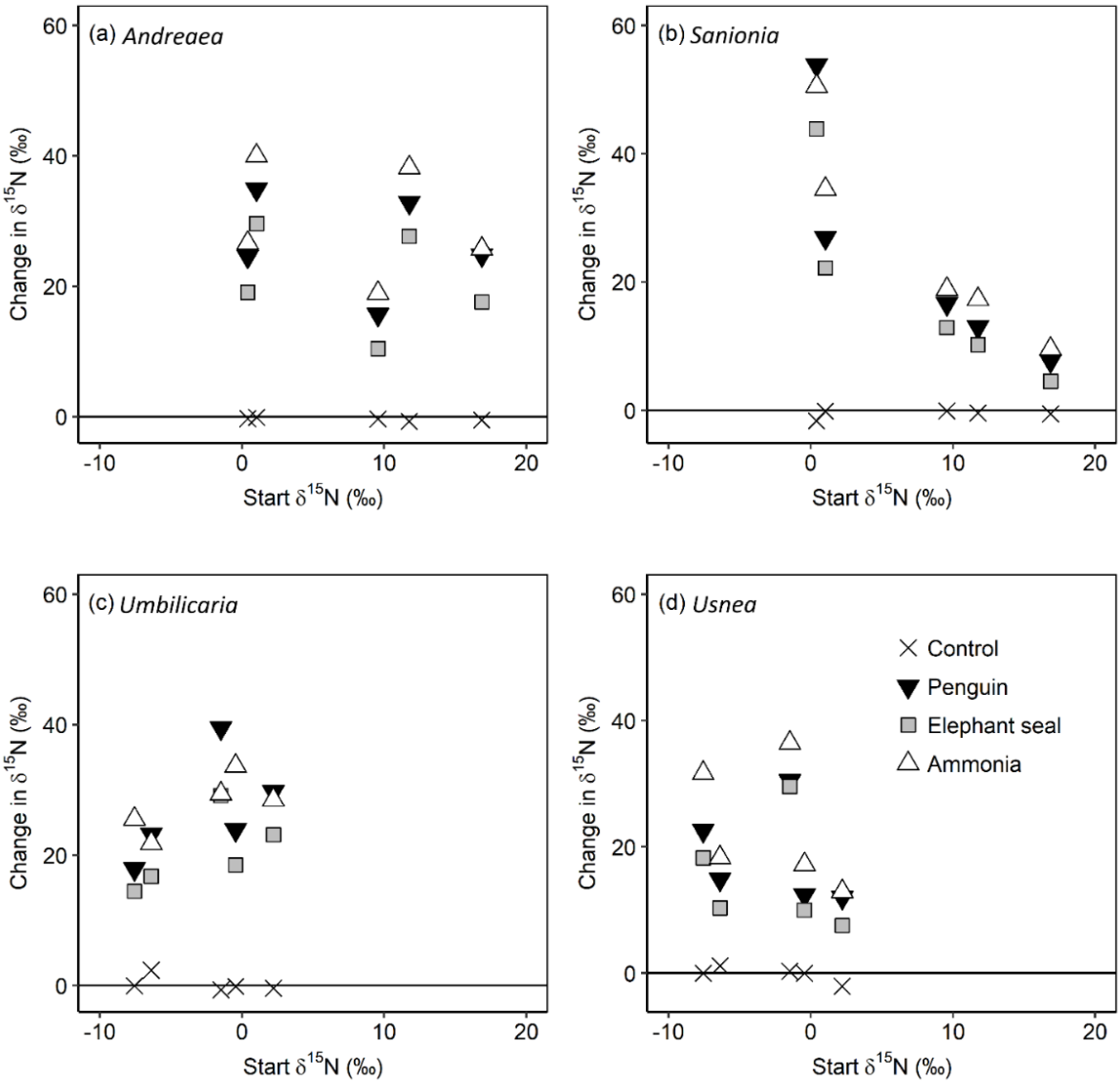
Supplementary material for: Bokhorst S., van Logtestijn R., Convey P. & Aerts R. 2019. Nitrogen isotope fractionation explains the ^{15}N enrichment of Antarctic cryptogams by volatilized ammonia from penguin and seal colonies. *Polar Research 38*. https://doi.org/10.33265/polar.v38.3355. Correspondence: Stef Bokhorst, Department of Ecological Science, Vrije Universiteit Amsterdam, De Boelelaan 1085, NL-1081 HV Amsterdam, The Netherlands. E-mail: s.f.bokhorst@vu.nl



Supplementary Fig. S1. Species-specific changes in $\delta^{15}N$ signature after exposure to penguin guano, elephant seal dung, ammonia or water (control). Change in $\delta^{15}N$ is plotted against the cryptogam $\delta^{15}N$ signature at the start of the experiment. *Andreaea* and *Sanionia* are mosses while *Umbilicaria* and *Usnea* are lichens. Each symbol represents an individual cryptogam sample.

Supplementary Table S1. Initial nitrogen concentrations, $\delta^{15}N$ and pH of cryptogam species used in the isotopic labelling study and the locations these were collected from. Each species sample was used once for each treatment (n = 4 treatments × 5 replicates).

Species	Sample location	% N	$\delta^{15}N$	pH
Andreaea regularis	Byers Peninsula	0.56	4.21	4.47
	Signy Island	0.83	-3.07	4.59
	Byers Peninsula	1.35	6.64	4.38
	Signy Island	1.41	8.29	4.53
	Signy Island	2.14	12.20	4.76
Sanionia uncinata	Byers Peninsula	0.19	0.40	5.04
	Signy Island	0.96	1.02	5.08
	Rothera	1.79	11.76	5.52
	Signy Island	2.37	9.56	5.67
	Rothera	3.63	16.86	6.42
Usnea antarctica	Byers Peninsula	0.40	-6.51	5.03
	Signy Island	1.09	-3.12	5.10
	Rothera	1.43	12.22	4.74
	Rothera	1.87	5.35	5.08
	Signy Island	2.35	-1.55	5.10
Umbilicaria antarctica	Byers Peninsula	0.74	-1.48	4.89
	Rothera	0.81	2.21	4.97
	Rothera	1.05	-0.45	4.88
	Rothera	1.63	-6.38	5.00
	Signy Island	1.95	-7.56	5.49