Fekete R., Mesterházy A., Valkó O. & Molnár V. A. (2018): A hitchhiker from the beach: the spread of a maritime halophyte *Cochlearia danica* along salted continental roads. – Preslia 90: 23–37.

Electronic Appendix 1. Published occurrences of *Cochlearia danica* along roads in continental Europe. Records are listed according to the year of occurrence.

Country	Municipality	Road number	Category of road	Altitude (m, a.s.l.)	Year	Source
Belgium	ND	ND	ND	ND	ND	Mennema 1986
Germany	Osnabrück	A1	motorway	112	1986	Dunkel 1987
Netherlands	ND	ND	ND	ND	ND	Koch 1996
Belgium	Diegem	A201	motorway	32	1995	Olivier 1996
Belgium	Haaht	N32	highway	11	1995	Olivier 1996
Belgium	Steenokkerzeel	Bataviastraat	sideroad	22	1995	Olivier 1996
Netherlands	Amersfort	A1	motorway	47	1986	Zonderwijk & Groen1996
Netherlands	Ede	A12	motorway	35	1986	Zonderwijk & Groen 1996
Netherlands	Leerdam	A15	motorway	-1	1986	Zonderwijk & Groen1996
Netherlands	Eindhoven	A58	motorway	20	1986	Zonderwijk & Groen1996
Germany	Nordrhein-Westfalen	A43	motorway	54	1997	Koch 1997
Germany	Nordrhein-Westfalen	A1	motorway	60	1997	Koch 1997
Germany	Karlsruhe - Basel	A5	motorway	148	1995	Breunig 2000
Germany	Riegel am Kaiserstuhl	A5	motorway	175	1999	Breunig 2000
Germany	Nürnberg	A6	motorway	458	1996	Dunkel et al. 2001
Germany	Fürth	A73	motorway	286	2001	Dunkel et al. 2001
Germany	Bamberg - Breitengüßbach	B4/173A	highway	240	2001	Dunkel et al. 2001
Germany	Lichtnfels	B173	highway	278	2001	Dunkel et al. 2001
Germany	Schweinfurt - Bamberg	A70	motorway	259	2001	Dunkel et al. 2001
Germany	Schwarzbach	A9	motorway	384	2003	Korsch 2004
France	Versailles	D10	highway	120	2000	Cochard 2005

France	Versailles	D109	highway		2000	Cochard 2005
France	Versailles	N12	highway	174	2000	Cochard 2005
France	Acquigny	N154	highway	19	2001	Cochard 2005
France	Ailly	A13	motorway	139	2001	Cochard 2005
France	Saint-Aubin-sur-Gaillon	A13	motorway	137	2001	Cochard 2005
France	Petit-Couronne	N138	highway	122	2001	Cochard 2005
France	Dammartin-en-Göele	N2	highway	121	2002	Cochard 2005
France	Villebon-sur-Yvette	A10	motorway	115	2002	Cochard 2005
France	Ulis	N118	highway	157	2002	Cochard 2005
Switzerland	Sursee	N2	motorway	498	1995	Breunig 2005
Germany	Eisenach	A4	motorway	328	1999	Zündorf et al. 2006
Germany	Emden	A31	motorway	-4	2008	Frahm 2008
Austria	Pöchlarn	A1	motorway	220	2007	Raabe 2008
Germany	Braunschweig	A2	motorway	271	2006	Brandes 2009
Germany	Salzgitter – Wolfsburg	A39	motorway	103	2006	Brandes 2009
Germany	Braunschweig – Vienenburg	A395	motorway	139	2006	Brandes 2009
Germany	Bochum	A43	motorway	89	2006	Jagel & Gausmann 2009
Germany	Bochum	A44	motorway	106	2006	Jagel & Gausmann 2009
Germany	Bochum	Universitätsstraße	sideroad	126	2006	Jagel & Gausmann 2009
Germany	Kempten Leubas	A7	motorway	700	2008	Zidorn 2010
Germany	Aichen	A8	motorway	700	2008	Zidorn 2010

Germany	Ulm-Elchingen	A8	motorway	460	2008	Zidorn 2010
Germany	Bochum	A40	motorway	82	2010	Buch & Jagel 2011
Germany	Wildeshausen	A1	motorway	42	2011	Feder 2012
Germany	Eichrodt	Weinberg-str.	sideroad	305	2011	Klug 2012
Austria	Suben	A8	motorway	340	2012	Hohla & Raabe 2012
Austria	Niederndorf	A8	motorway	460	2012	Hohla & Raabe 2012
Czech Republic	Poděbrady	D11	motorway	201	2016	Ducháček et al. 2017
Czech Republic	Písková Lhota	D11	motorway	190	2017	Ducháček et al. 2017
Czech Republic	Lípa	E442	highway	293	2016	Ducháček et al. 2017
Czech Republic	Cheb-Chlumecek	E49	highway	484	2017	Ducháček et al. 2017
Czech Republic	Cheb-Hradiste	D6	motorway	446	2017	Ducháček et al. 2017
Czech Republic	Cheb-Ypsilonka	D6	motorway	464	2017	Ducháček et al. 2017
Czech Republic	Mlýnec	D5	motorway	550	2017	Ducháček et al. 2017
Czech Republic	Nýřany	D5	motorway	345	2017	Ducháček et al. 2017
Czech Republic	Tlučná	D5	motorway	353	2017	Ducháček et al. 2017
Czech Republic	Mýto	D5	motorway	445	2017	Ducháček et al. 2017
Czech Republic	Bílý Kostel nad Nisou	E443	highway	310	2016	Ducháček et al. 2017
Czech Republic	Lísky	D1	motorway	470	2017	Ducháček et al. 2017
Czech Republic	Jiřice	D1	motorway	570	2017	Ducháček et al. 2017
Czech Republic	Humpolec	D1	motorway	605	2017	Ducháček et al. 2017
Czech Republic	Zlín-Kocanda	49018	sideroad	325	2016	Ducháček et al. 2017

References

Brandes D. (2009): Autobahnen als Wuchsorte und Ausbreitungswege von Ruderal-und Adventivpflanzen. – Braunschw. Naturkundl. Schr. 8: 373–394.

Breunig T. (2000): Eine weitere Art erobert die Autobahn-Mittelstreifen – auf das Dänische Löffelkraut ist zu achten. – Pflanzenpresse 1: 12.

Breunig T. (2005): Neuzuzug aus dem Norden. Das Dänische Löffelkraut ist via Autobahn auf dem Weg Richtung Süden. – Reinach (Basel): Koordinationsstelle Biodiversitäts-Monitoring Schweiz, Hintermann & Weber AG. BDM-inside 6: 4–5.
Buch C. & Jagel A. (2011): Still-Leben Ruhrschnellweg–Eine floristisch-faunistische Kartierung der A40 in Bochum. – Jahrb. Bochumer Bot. Ver. 2: 120–127.
Cochard P. O. (2005): *Cochlearia danica* L., une halophyte adventice des autoroutes. – Symbioses 13: 69−74.
Ducháček M., Batoušek P., Brabec J., Kúr P. & Višňák R. (2017): Lžičník dánský (*Cochlearia danica*) – nový zavlečený druh pro Českou republiku [*Cochlearia danica* – a alien species new to the Czech Republic]. – Zpr. Čes. Bot. Společ. 52: 1–8.
Dunkel F. G. (1987): Das Dänische Löffelkraut (*Cochlearia danica* L.) als Straßenrandhalophyt in der Bundesrepublik. – Florist. Rd. br. 21: 39.
Dunkel F. G., Meierott L. & Thesinger D. (2001): *Cochlearia danica* L. erreicht Bayern. – Ber. Bayer. Bot. Ges. 71: 159–160.
Feder, J. (2012): Bemerkenswerte Pflanzenfunde an Straßen und auf Plätzen in Niedersachsen und Bremen (2011). – Brem. Bot. Briefe 14: 10–42.Frahm J. P. (2008): Überdüngung und Versalzung durch Katalysatoren? Nitrophile Moose und Flechten nehmen zu. – Biologie in unserer Zeit 38: 94–101.
Hohla M. & Raabe U. (2012): *Cochlearia danica* – das Dänische Löffelkraut–kein überraschender Neuzugang der Flora von Oberösterreich. – Stapfia 97: 206–209.
Jagel, A., & Gausmann, P. (2009): Zum Wandel der Flora von Bochum im Ruhrgebiet (Nordrhein-Westfalen) in den letzten 120 Jahren. – Jahrb. Bochumer Bot. Ver, 1: 7–53.
Klug W. (2012): Bemerkenswerte floristische Entwicklung auf der ehemaligen Autobahnstrecke am Südhang der Hörselberge und Pflanzenfunde in Westthüringen. – Inform. Florist. Kartierung Thüringen 31: 1–48.
Koch M. (1996): Zur Ausbreitung des Dänischen Löffelkrautes (*Cochlearia danica* L.) als Küstensippe in das Niedersächsische Binnenland. – Flor. Rundbr. 30: 20–23.
Koch M. (1997): Kurznotiz zur südlichen Ausbreitung des Dänischen Löffelkrautes (*Cochlearia danica* L.) in Nordrhein-Westfalen. – Flor. Rundbr. 31: 136–138.
Korsch H. (2004): Zum Stand der Kartierung der FFH- und Rote-Liste-Pflanzenarten in Thüringen. Inform. Florist. Kartierung Thüringen 23: 1-36.
Mennema J. (1986): *Cochlearia danica* L. op weg naar de binnenlanden van België en West-Duitsland [*Cochlearia danica* L. on the way to the inlands of Belgium and West-Germany]. – Dumortiera 34: 139–142.
Olivier J.-F. (1996): Nouvelle stations de *Cochlearia danica* L. près de Bruxelles. – Dumortiera 66: 1–3.
Raabe U. (2008): *Cochlearia danica*. – In: Fischer M. A. & Niklfeld H. (eds), Floristische Neufunde (76–98) – Neilreichia 5: 267–268.
Zidorn C. (2010): *Cochlearia danica* L. an Autobahnen auf der Schwäbischen Alb und in Bayrisch-Schwaben. – Ber. Bayer. Bot. Ges. 80: 174–176.
Zonderwijk M. & Groen C. L. G. (1996): Recente binnenlandse verspreiding van *Cochlearia danica* L. – Gorteria 22: 22–28.
Zündorf H.-J., Günther K.-F., Korsch H. & Westhus W. (2006): Flora von Thüringen. – Weissdorn-Verlag, Jena.

Electronic Appendix 2. In vitro germination rates of *Cochlearia danica* on substrates with different NaCl-concentrations.

NaCl concentration (mass percent)	Number of tested seeds	Number of germinated seeds	Germination rate
0.00	50	45	0.90
0.00	50	45	0.90
0.00	50	47	0.94
0.03	50	46	0.92
0.03	50	43	0.86
0.03	50	46	0.92
0.05	50	46	0.92
0.05	50	43	0.86
0.05	50	47	0.94
0.07	50	47	0.94
0.07	50	44	0.88
0.07	50	46	0.92
0.10	50	42	0.84
0.10	50	45	0.90
0.10	50	49	0.98
0.20	50	49	0.98
0.20	50	43	0.86
0.20	50	44	0.88
0.30	50	42	0.84
0.30	50	42	0.84
0.30	50	45	0.90
0.40	50	44	0.88
0.40	50	46	0.92
0.40	50	44	0.88
0.50	50	46	0.92
0.50	50	44	0.88
0.50	50	41	0.82
0.75	50	33	0.66
0.75	50	40	0.80
0.75	50	32	0.64
1.00	50	8	0.16
1.00	50	10	0.20
1.00	50	5	0.10
1.50	50	0	0.00
1.50	50	1	0.02
1.50	50	2	0.04
2.00	50	1	0.02
2.00	50	0	0.00
2.00	50	0	0.00
2.50	50	0	0.00
2.50	50	0	0.00
2.50	50	0	0.00

Electronic Appendix 3. Table. Results of the Tukey test (Honestly significant differences, HSD) (only significant results are shown).

NaCl concentrations (m/m%)	p-value
0.75 vs. 0	<0.001
1 vs. 0	<0.001
1.5 vs. 0	<0.001
2 vs. 0	<0.001
2.5 vs. 0	<0.001
0.75 vs. 0.03	<0.001
1 vs. 0.03	<0.001
1.5 vs. 0.03	<0.001
2 vs. 0.03	<0.001
2.5 vs. 0.03	<0.001
0.75 vs. 0.05	<0.001
1 vs. 0.05	<0.001
1.5 vs. 0.05	<0.001
2 vs. 0.05	<0.001
2.5 vs. 0.05	<0.001
0.75 vs. 0.07	<0.001
1 vs. 0.07	<0.001
1.5 vs. 0.07	<0.001
2 vs. 0.07	<0.001
2.5 vs. 0.07	<0.001
0.75 vs. 0.1	<0.001
1 vs. 0.1	<0.001
1.5 vs. 0.1	<0.001
2 vs. 0.1	<0.001
2.5 vs. 0.1	<0.001
0.75 vs. 0.2	<0.001
1 vs. 0.2	<0.001
1.5 vs. 0.2	<0.001
2 vs. 0.2	<0.001
2.5 vs. 0.2	<0.001
0.75 vs. 0.3	0.01
1 vs. 0.3	<0.001
1.5 vs. 0.3	<0.001
2 vs. 0.3	<0.001
2.5 vs. 0.3	<0.001
0.75 vs. 0.4	<0.001
1 vs. 0.4	<0.001
1.5 vs. 0.4	<0.001
2 vs. 0.4	<0.001
2.5 vs. 0.4	<0.001
0.75 vs. 0.5	0.004
1 vs. 0.5	<0.001
1.5 vs. 0.5	<0.001

2 vs. 0.5	<0.001
2.5 vs. 0.5	<0.001
1 vs. 0.75	<0.001
1.5 vs. 0.75	<0.001
2 vs. 0.75	<0.001
2.5 vs. 0.75	<0.001
2 vs. 1	0.023
2.5 vs. 1	0.015

Electronic Appendix 4. Number of *Cochlearia danica* individuals in 10 × 10 cm plots in 2016. Notations P1–P11 refer to the eleven sampling plots.

	Mean	Median	SD	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
Biharkeresztes, 04.04.2016.	20.9	20	9	35	21	20	20	17	36	7	12	23	13	26
Győr, 04.18.2016.	33.1	30	21	21	14	18	38	18	32	40	18	87	30	48

Electronic Appendix 5. Reproductive characteristics of *Cochlearia danica* in 2016 and 2017 (Biharkeresztes).

	2016							2017						
Individual	Number of flowering stems	Number of flowers/ inflorescence						Number of flowering stems	Number of flowers/ inflorescence					
1	7	9	11	18	11	12		9	10	9	15	3	6	
2	7	15	14	15	11	18		4	7	8	11	9		
3	8	14	13	12	15	13		1	13					
4	4	8	16	18	7			1	11	7	7			
5	6	10	7	15	13	11		2	10	14				
6	4	15	9	12	17			1	7					
7	5	11	14	11	12	11		1	6					
8	3	14	11	11				1	8					
9	4	12	8	7	9			3	11	17	9			
10	6	11	15	12	17	12		5	10	8	14	11	15	
11	5	9	8	9	6	10		6	12	9	11	15	14	
12	4	14	16	16	13			3	6	11	6			
13	4	8	7	7	9			3	13	6	7			
14	2	5	12					8	8	6	8	14	10	
15	6	10	10	5	7	13		2	10	9				
16	2	13	7					1	11					
17	4	7	8	12	10			7	11	10	13	12	10	
18	2	5	13					1	15					
19	1	10						2	11	9				
20	2	5						3	14	15	14			
21	3	11	12	5				1	15					
22	3	5	7	6				8	12	12	9	13	17	
23	4	7	10	4	9			2	5	9				
24	5	14	15	16	9	7		1	8					
25	2	4	12					1	6					
26	3	12	9	8				5	11	8	9	10	12	
27	1	13						2	6	11				
28	5	10	6	7	12	11		8	11	12	14	11	13	
29	2	6	11					1	10					
30	1	9						6	12	11	15	14	14	

Electronic Appendix 6. Seed numbers in fruits in 2016 and 2017 (Biharkeresztes).

2016	2017
10	4
10	10
5	10
5	9
7	12
9	9
6	11
5	7
7	9
8	12
6	10
8	12
8	12
8	10
11	10
8	13
8	9
8	8
7	10
7	8
7	11
8	9
5	9
7	12
5	9
6	7
5	10
7	10
9	2
8	5
9	3
11	13
8	10
7	13
8	13
6	13
8	12
8	9
7	4
8	7
9	8
9	12
8	8
8	8
7	8
6	9
10	12
8	10
7	9
7	10
	9
	7

2016	2017	
	11	
	9	
	13	
	11	
	5	
	11	
	8	
	11	
	13	
	5	x
	6	
	9	
	8	
	11	
	11	
	11	
	6	
	11	
	6	
	8	
	11	
	10	
	9	
	9	
	10	
	5	
	10	
	8	
	8	
	9	
	5	
	8	
	9	
	2	
	5	
	5	
	4	
	2	
	11	
	10	
	10	
	11	
	10	
	11	
	11	
	9	
	9	
	6	