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## Appendix 1

Table A1. Abundance (= number of plots with species presence) of lichen species found on 293 Norway spruce stumps in young managed forests in southern Sweden. Nomenclature for lichens follows Nordin et al. (2014). Lichen photobiont identity according to Smith et al. (2009), Rambold et al. (1998), Foucard (2001), Piercey-Normore and DePriest (2001) and Persoh et al. (2004).

<i>Asterochloris</i> spp. as photobiont	<i>Trebouxia</i> spp. as photobiont	Micareoid algae as photobiont	Other/Unknown green algal photobiont	Without photobiont
<i>Cladonia arbuscula</i> (161)	<i>Cetraria islandica</i> (1)	<i>Micarea denigrata</i> coll. (392)	<i>Absconditella lignicola</i> (1)	<i>Mycocalicium subtile</i> (4)
<i>Cladonia botrytes</i> (495)	<i>Cetraria sepincola</i> (2)	<i>Micarea prasina</i> coll. (1)	<i>Bacidina</i> sp. (31)	
<i>Cladonia cenotea</i> (194)	<i>Hypogymnia physodes</i> (72)		<i>Catinaria atropurpurea</i> (16)	
<i>Cladonia coniocraea</i> (682)	<i>Lecanora argentata</i> (5)		<i>Lecania cyrtella</i> (6)	
<i>Cladonia cornuta</i> (109)	<i>Lecanora saligna</i> (14)		<i>Ochrolechia microstictoides</i> (2)	
<i>Cladonia crispata</i> (5)	<i>Lecanora symmicta</i> (8)		<i>Placynthiella icmalea</i> (287)	
<i>Cladonia deformis</i> (3)	<i>Lecidea turgidula</i> (54)		<i>Puttea caesia</i> (9)	
<i>Cladonia digitata</i> (17)	<i>Parmelia sulcata</i> (7)		<i>Pycnora sorophora</i> (1)	
<i>Cladonia fimbriata</i> (419)	<i>Parmeliopsis ambigua</i> (97)		<i>Trapeliopsis granulosa</i> (38)	
<i>Cladonia furcata</i> (11)	<i>Parmeliopsis hyperopta</i> (11)		<i>Trapeliopsis flexuosa</i> (349)	
<i>Cladonia macilenta</i> (8)	<i>Vulpicida pinastri</i> (37)		<i>Xylographa parallela</i> (109)	
<i>Cladonia ramulosa</i> (17)			<i>Xylographa vitiligo</i> (5)	
<i>Cladonia rangiferina</i> (247)				
<i>Cladonia squamosa</i> (20)				
<i>Cladonia sulphurina</i> (3)				

### References for Table A1

- Foucard, T. 2001. Svenska skorplavar och svampar som växer på dem. [Swedish crustose lichens and fungi which grow on them]. – Interpublishing, Stockholm.
- Nordin, A. et al. 2014. Santesson's checklist of Fennoscandian lichen-forming and lichenicolous fungi. <<http://130.238.83.220/santesson/home.php?-link=Home>>
- Persoh, D. et al. 2004. The distribution of ascus types and photobiontal selection in Lecanoromycetes (Ascomycota) against the background of a revised SSU nrDNA phylogeny. – Mycol. Progr. 3: 103–111.
- Piercey-Normore, M.D. and DePriest, P.T. 2001. Algal switching among lichen symbioses. – Am. J. Bot. 88: 1490–1498.
- Rambold, G. et al. 1998. Photobionts in lichens: Possible indicators of phylogenetic relationships? – Bryologist 101: 392–397.
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Table A2. AIC-rankings of candidate models used for model-averaging.

Models used for model-averaging of estimates of parameters affecting colonizations of *Cladonia botrytes*. A threshold of  $\Delta i < 2$  was used for a model to be given a ranking. Term codes used in column “Model”: 1 = abundance of *Cladonia* spp.; 2 = decay; 3 = size of surrounding metapopulation.

Model	DF	log-lik	AICc	$\Delta i$	Weight
123	6	-61.09	134.87	0.00	0.56
12	5	-62.42	135.34	0.47	0.44

Table S3. Number of colonizations of nine additional species in three experimental treatments on cut surfaces of 50 Norway spruce stumps. In addition to these species and three colonizations of *Cladonia botrytes*, unidentifiable *Cladonia* squamules were found on all plots. *Asterochloris* = treatment with *Cladonia cenotea/digitata* paste; Sterilized = treatment with a sterilized paste of *H. physodes* and *C. cenotea/digitata*; Control = untreated controls.

	<i>Asterochloris</i>	Sterilized	Control
<i>Cladonia cenotea</i>	1	1	1
<i>Cladonia coniocraea</i>	28	15	16
<i>Cladonia digitata</i>	4	2	2
<i>Cladonia fimbriata</i>	15	17	12
<i>Cladonia rangiferina</i>	7	3	1
<i>Micarea misella</i>	8	9	8
<i>Placynthiella icmalea</i>	33	33	33
<i>Trapeliopsis flexuosa</i>	0	1	1
<i>Trapeliopsis granulosa</i>	1	1	0