Table S1. Divergence ages and 95% height posterior densities obtained with fossilized birth-death dating (Grimm et al. 2014) and the DPP model implemented in DPPDiv (Heath et al. 2012) using five minimum age constraints for calibration (P. Kapli, G. Grimm, unpubl. data)

'Monophyletic scenario'										'Paraphyletic scenario'				
	FBD (all fossils)	FBD (fronds, text-Fig. 13)				DPP, 5 minimum age fossil priors					DPP, 5 minimum age fossil priors		
Node (MRCA of…)	Median	Median	95%-HPD L.b.	95%-HPD U.b.	Δ to FBD_{All}	Median	95%-HPD L.b.	95%-HPD U.b.	Δ to FBD_{All}	Node (MRCA of…)	Median	Δ to FBD_{All}	Δ to DPP_{mon}
1 BAR-PAP	13	13	5	24	1	13	2	27	1	5 BAN-VAC	5	0	0
2 HYM-WIL	20	20	15	27	0	21	12	33	1	6 BAN-JAV	10	1	9
3 FRA-WIL	27	28	21	35	0	29	17	44	2	7 JAP-LAN	2	0	0
4 BAR-WIL	**116**	**117**	**102**	**137**	**1**	**121**	**71**	**174**	**6**	**8 JAP-REG**	**13**	**-1**	**0**
5 BAN-VAC	5	5	3	8	0	5	2	10	0	**9 JAP-VAC**	**92**	-20	-3
6 BAN-JAV	9	9	5	13	0	10	5	16	1	10 CLA-JAP	133	-1	3
7 JAP-LAN	2	2	0	3	-1	2	0	5	0	1 BAR-PAP	13	1	0
8 JAP-REG	**13**	**6**	**3**	**9**	**-7**	**13**	**12**	**15**	**-1**	2 HYM-WIL	19	**-1**	**-2**
9 JAP-VAC	**111**	**110**	**96**	**127**	**-1**	**94**	**84**	**127**	**-17**	3 FRA-WIL	29	**1**	**-1**
10 CLA-JAP	133	133	117	151	-1	129	98	171	-4	**4 BAR-WIL**	**88**	-27	-33
11a CIN-JAP	**238**	**241**	**225**	**270**	**3**	**233**	**176**	**337**	**-6**	**11b BAR-JAP**	**226**	**N/A**	**N/A**
12 Root (BAR-JAP)	**243**	**246**	**236**	**273**	**2**	**244**	**227**	**338**	**1**	**12 Root (CIN-JAP)**	**246**	**3**	**2**

Bold font = nodes constrained by oldest fossils when using node-dating with the DPP model

Reddish = higher (older) than, bluish = lower (younger) than expected value (FBD-inferred, all fossils; DPP, 5 minimum age constraints, under the assumption of a monophyletic genus*Osmunda*)

Grimm, G. W., Kapli, P., Bomfleur, B., McLoughlin, S., and Renner, S. S.: Using more than the oldest fossils: Dating Osmundaceae with the fossilized birth-death process, Syst. Biol., doi: 10.1093/sysbio/syu108

Heath, T. A., Holder, M. T., and Huelsenbeck, J. P.: A dirichlet process prior for estimating lineage-specific substitution rates, Mol. Biol. Evol., 29, 939–955, 2012.