Supplementary file A1

Table A.1 Variables, definitions and estimates of the Elfving basal area growth model (Elfving 2010). The response variable is log(G_growth), the natural logarithm of basal area growth over five years (m^2 ha^{-1} 5-years^{-1}).

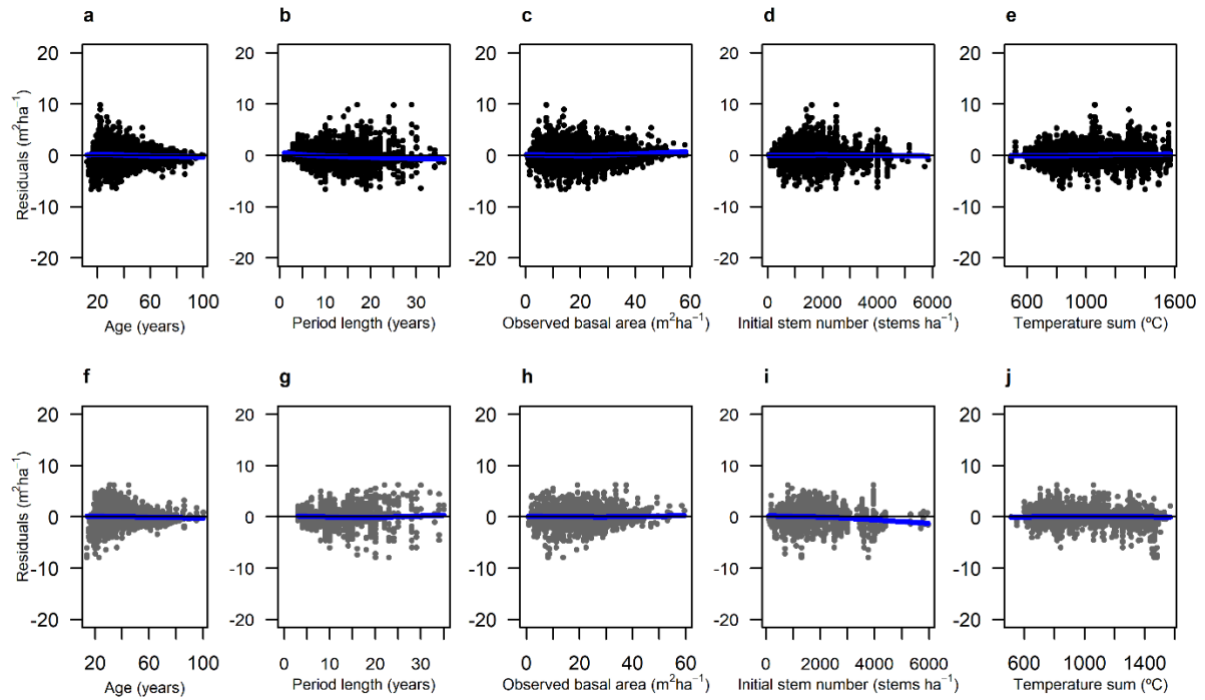| Variable	Definition	Estimate
Intercept	Linear model intercept	0.2702
logage	$\log(t_1)$, where t_1 is age at period start (year)	-0.5819
conba	(conifer proportion (0-1) of basal area) / t_1	8.1754
pineveg	(pine proportion (0-1) of basal area) * veg	-0.0233
birch_prop2	(birch proportion (0-1) of basal area)²,	-0.3163
logba	log(ba), were ba = basal area at period start (m^2 ha^{-1})	0.5416
G1	Total basal area at period start (m^2 ha^{-1})	-0.00932
logsn	log(sn), were sn is stem number (stem ha^{-1}) of trees present both in the beginning and end of the period	0.1895
veg	Ground vegetation type index (Table 3)	0.0622
peat_veg	veg if there is peat on the plot, else = 0	-0.0252
moist	1 if the soil moisture class is classified as moist, else 0	-0.0476
wet	1 if the soil moisture class is classified as wet, else 0	-0.1810
sis	Site index according to site factors for site-indicative species (m)	0.0113
birch_cal	birch proportion of basal area *exp(-0.01*(t_{sum}-300), t_{sum} = Temperature sum(day-degrees >5 °C), calculated from altitude and latitude (Odin et al. 1983)	-10.5278
ditch	1 if there is a ditch within 25 m from plot center, else = 0	0.0533
fertris	1 on fertilized plots, else = 0	0.3091
border	1 if there is a border to open area within 20 m from plot center, else = 0	0.0755
divid	1 if the plot is divided, else = 0	0.0621
hu0t10	1 if the plot was thinned within 10 years before start of the growth period	0.1469
hu10t25	1 if the plot was thinned 11-25 years before start of the growth period	0.0624
logba_rel	log(G1/G), where G is basal area (m^2 ha^{-1}) in surrounding stand according to relascope measurement	0.1266
a3	1 if the plot was first measured 1983, else = 0	-0.0610
a4	1 if the plot was first measured 1984, else = 0	-0.0432
a6	1 if the plot was first measured 1986, else = 0	0.0434

Fig. A.1. Residual basal area for the fitted Model 1 (Scots pine) (a-e) and the model validation (f-j) as a function of different predictor variables. The blue lines show the trend in the residuals.
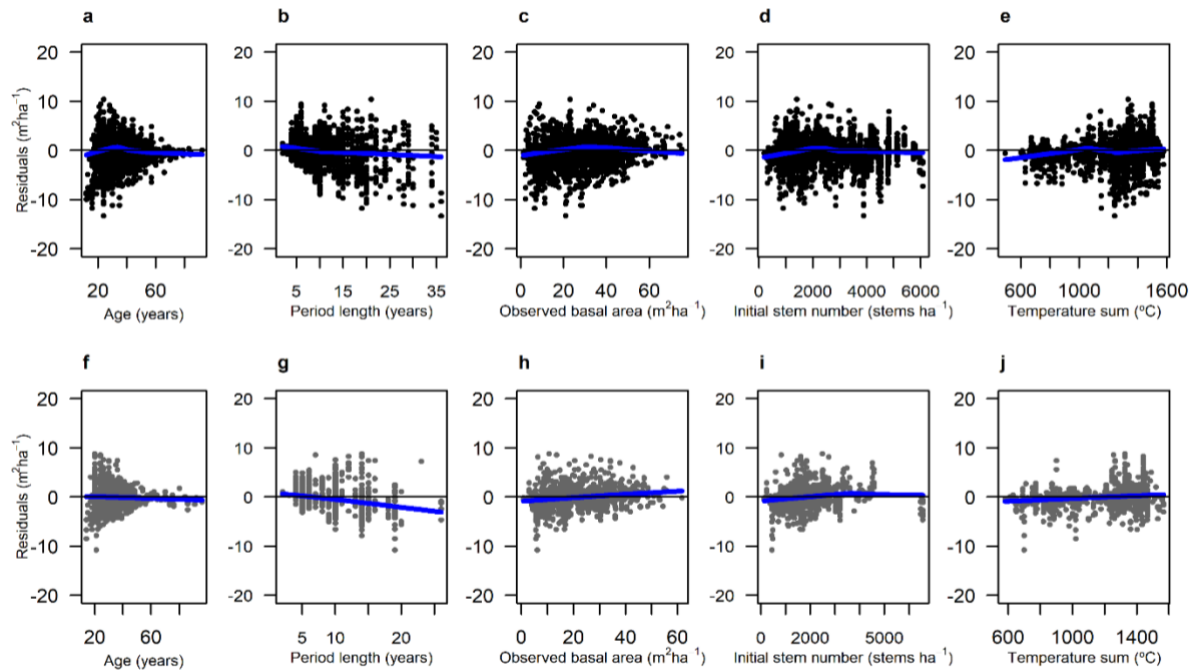

Fig. A.2. Residual basal area for the fitted Model 2 (Norway Spruce) (a-e) and the model validation (e-j) as a function of different predictor variables. The blue lines show the trend in the residuals.
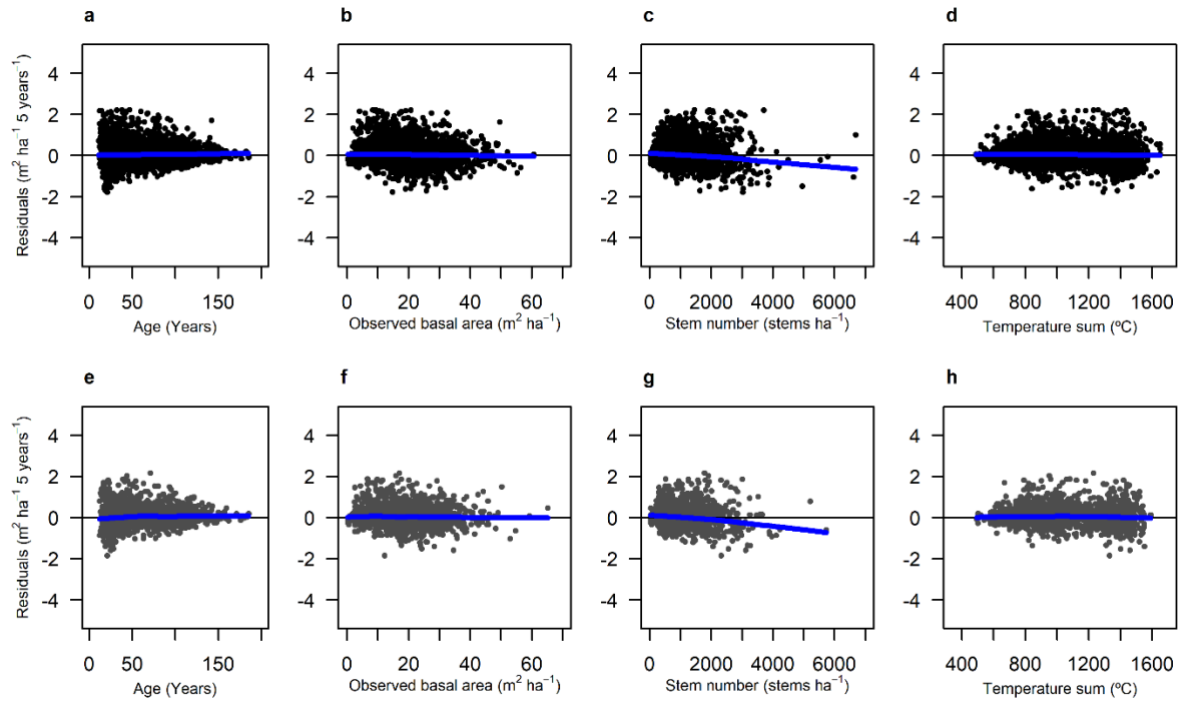
Fig. A.3. Residual basal area growth for the fitted Model 3 (Scots pine) (a-d) and the model validation (e-h) as a function of different predictor variables. The blue lines show the trend in the residuals.
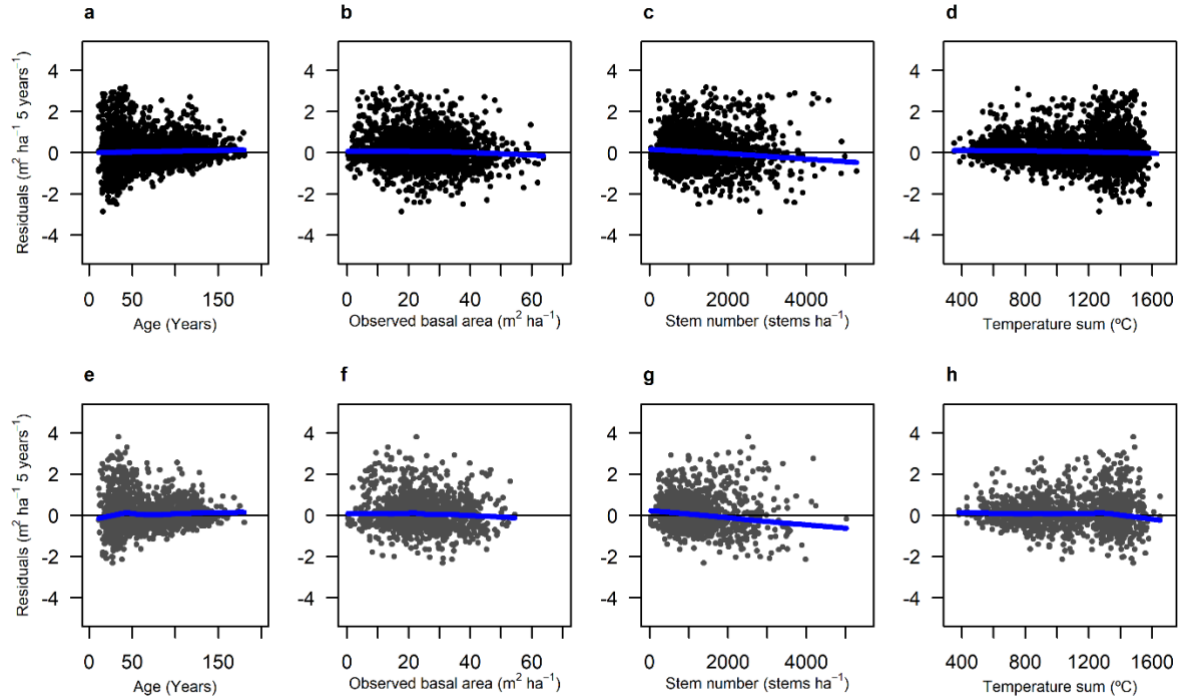

Fig. A.4. Residual basal area growth for the fitted Model 4 (Norway Spruce) (a-d) and the model validation (e-h) as a function of different predictor variables. The blue lines show the trend in the residuals.