Table 1. Number of trees per province and territory and per species in the data set.

	Provinces and territories[†]											
Species*	AB	BC	MB	NB	NL	NS	NT	ON	PE	QC	SK	YT	Total
Alpine fir	60												60
Balsam fir	20		20		283	49		70		177	20		639
Balsam poplar	20		20				50	97			20		207
Basswood								80					80
Beech								81		96			177
Black ash								31		42			73
Black cherry								78					78
Black spruce	20		20		300	49	48	73		714	20	290	1534
Eastern hemlock								148		87			235
Eastern redcedar								33					33
Eastern white-cedar								91		93			184
Eastern white pine								144		55			199
Grey birch						43							43
Hickory								35		41			76
Hop-hornbeam								14					14
Jack pine	20		21			41	52	74		136	20		364
Largetooth aspen								100					100
Lodgepole pine	60											141	201
Red ash								27					27
Red maple						46		68		63			177
Red oak								117					117
Red pine						47		272		52			371
Red spruce										55			55
Silver maple								40					40
Sugar maple								113		122			235
Tamarack larch	20		20		232	46	56	84		97	20		575
Trembling aspen	20		19		67	46	54	226		133	20	188	773
White ash								73		36			109
White birch	20		20		270	44		134		98	20		606
White elm								81					81
White oak								61					61
White spruce	20		20		164	44	56	76		78	20	354	832
Yellow birch					53			98		129			280
Total	280		160		1369	455	316	2619		2304	160	973	8636

*Refer to Appendix B.
[†]AB, Alberta; BC, British Columbia; MB, Manitoba; NB, New Brunswick; NL, Newfoundland and Labrador; NT, Northwest Territories; NS, Nova Scotia; NU, Nunavut (Northwest Territories in the 1980s); ON, Ontario; PE, Prince Edward Island; QC, Quebec; SK, Saskatchewan; YT, Yukon.

Methods

As proposed by Parresol (1999, 2001), a set of nonlinear regression equations was specified in such a way that (*i*) each compartment regression contains its own independent variables, and the total tree regression is a function of all the specified independent variables; (*ii*) each regression can use its own weight function; and (*iii*) additivity is ensured by setting constraints on regression coefficients so that the predicted biomasses of the compartments add up to the prediction of the total biomass. The set of equations was calibrated with the procedure MODEL in SAS/ETS (SAS Institute Inc. 1999*a*), using joint generalized least squares, more commonly called seemingly unrelated regressions (Gallant 1987). This technique results in lower variance of the regression coefficients by taking into account the contemporaneous correlations among the regression residuals of the equations (Parresol 1999). In fact, it is more realistic to consider that compart-

Table 2. Descriptive statistics for dbh, height, and total biomass by tree species.*

Species	No. of trees	dbh (cm)	Height (m)	Total biomass (kg)
Alpine fir	60	19.6±1.3 (2.1;36.5)	14.8±0.8 (2.2;23.7)	158.4±19.5 (1.7;461.8)
Balsam fir	639	16.4±0.4 (1.5;42.4)	12.2±0.2 (1.6;52.2)	103.4±4.7 (0.5;649.0)
Balsam poplar	207	21.5±0.8 (2.0;53.2)	16.3±0.4 (3.3;27.0)	199.6±16.1 (0.5;1516.3)
Basswood	80	26.5±1.6 (3.7;54.8)	17.5±0.7 (3.8;26.1)	326.5±36.9 (2.1;1118.9)
Beech	177	23.5±0.9 (1.8;46.3)	17.5±0.4 (2.9;26.5)	405.4±27.3 (0.7;1372.5)
Black ash	73	16.2±1.2 (2.0;43.1)	14.4±0.6 (2.6;22.9)	142.0±21.6 (1.0;926.4)
Black cherry	78	22.0±1.3	16.6±0.6	276.1±29.1