Supplementary Material

Allometric equations for volume, biomass and carbon in commercial boles harvested in a managed forest in the southwestern Amazon

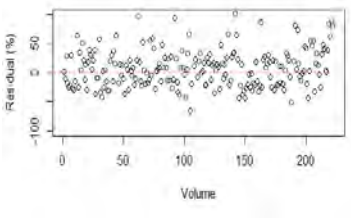
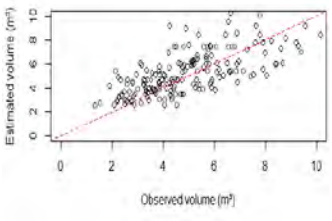
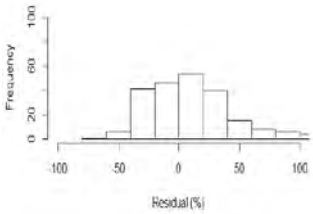
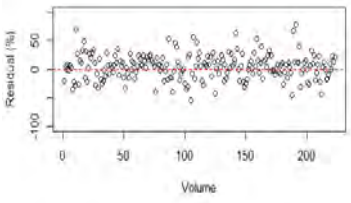
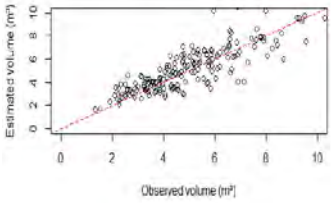
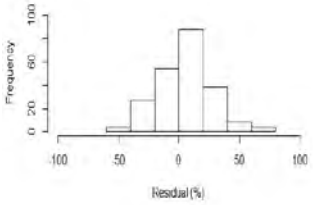
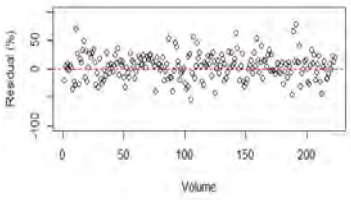
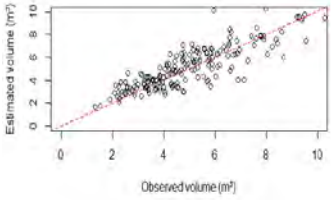
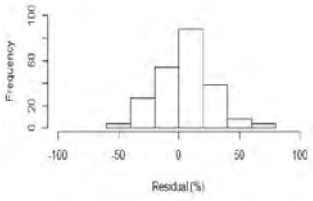
Flora Magdaline Benitez Romero[1], Laércio Antônio Gonçalves Jacovine[2], Sabina Cerruto Ribeiro[3], Carlos Moreira Miquelino Eleto Torres[2], Liniker Fernandes da Silva[4], Ricardo de Oliveira Gaspar[5], Samuel José Silva Soares da Rocha[2], Christina Lynn Staudhammer[6], Philip Martin Fearnside[1,*]

[1] Instituto Nacional de Pesquisas da Amazônia (INPA), Av. André Araújo, 2936, Manaus, Amazonas, CEP 69067-375, Brazil; magdaline.romero@inpa.gov.br
[2] Departamento de Engenharia Florestal, Universidade Federal de Viçosa (UFV), Viçosa, Minas Gerais, CEP 36570-900, Brazil; jacovine@ufv.br; carlos.eleto@ufv.br; samueljoserocha@gmail.com;
[3] Centro de Ciências Biológicas e da Natureza, Universidade Federal do Acre (UFAC) - Campus Universitário BR 364, Km 04, Distrito Industrial, Rio Branco, Acre, CEP 69920-900, Brazil; sabina.ufac@gmail.com
[4] Departamento de Engenharia Florestal, Universidade Federal do Recôncavo da Bahia (UFRB), Cruz das Almas, Bahia, CEP 44380-000, Brazil; linikerfs@gmail.com
[5] Departamento de Engenharia Florestal, Faculdade de Tecnologia, Universidade de Brasília (UnB), Campus Darcy Ribeiro Brasília, Distrito Federal (DF), CEP 70910-000 Brazil; ricogaspar@unb.br
[6] Department of Biological Sciences, University of Alabama (UA), 2019B Shelby Hall, Tuscaloosa, Alabama, 35487, U.S.A.; cstaudhammer@ua.edu

* Correspondence: pmfearn@inpa.gov.br

Figure S1. Volume models MV1-MV3 compared with other studies: Percent deviation, Observed versus estimated values and regression residuals

Linear models for estimating bole volume for twenty tree species sampled in a managed forest area in Acre state, Brazil.

	i) Percent deviation	ii) Observed versus estimated values	iii) Frequency distribution of regression residuals
Model MV1			
Model MV2			
Model MV3			

Husch (1963; logarithmic)

$$\ln(V) = \beta_0 + \beta_1 \ln(d) + \varepsilon$$

Spurr (1952 logarithmic)

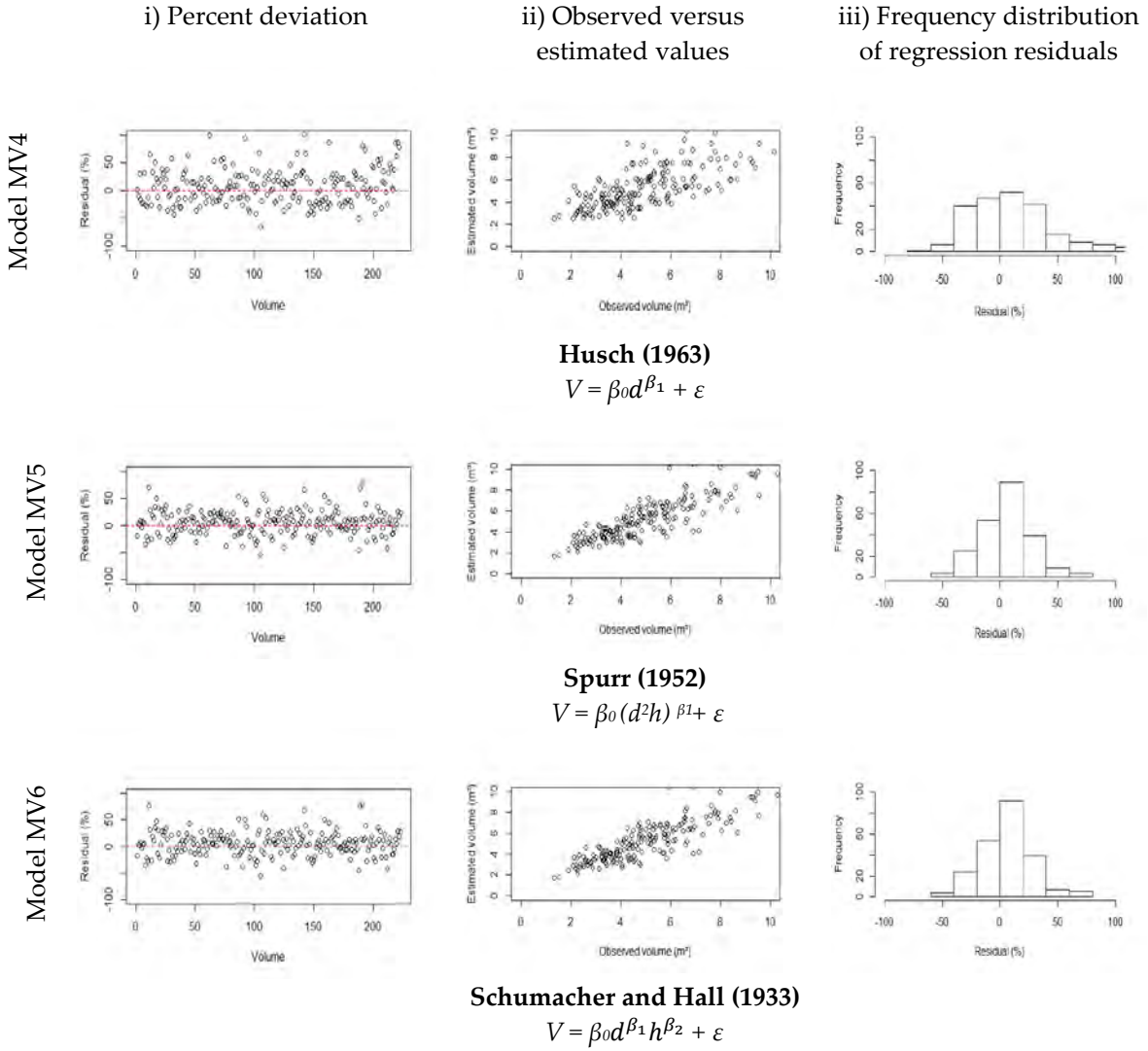
$$\ln(V) = \beta_0 + \beta_1 \ln(d^2h) + \varepsilon$$

Schumacher and Hall (1933; logarithmic)

$$\ln(V) = \beta_0 + \beta_1 \ln(d) + \beta_2 \ln(h) + \varepsilon$$

Figure S2. Volume models MV4-MV6 compared with other studies: Percent deviation, Observed versus estimated values and regression residuals.

Non-linear models for estimating bole volume for twenty tree species sampled in a managed forest area in Acre state, Brazil.



Husch (1963)

$V = \beta_0 d^{\beta_1} + \varepsilon$

Spurr (1952)

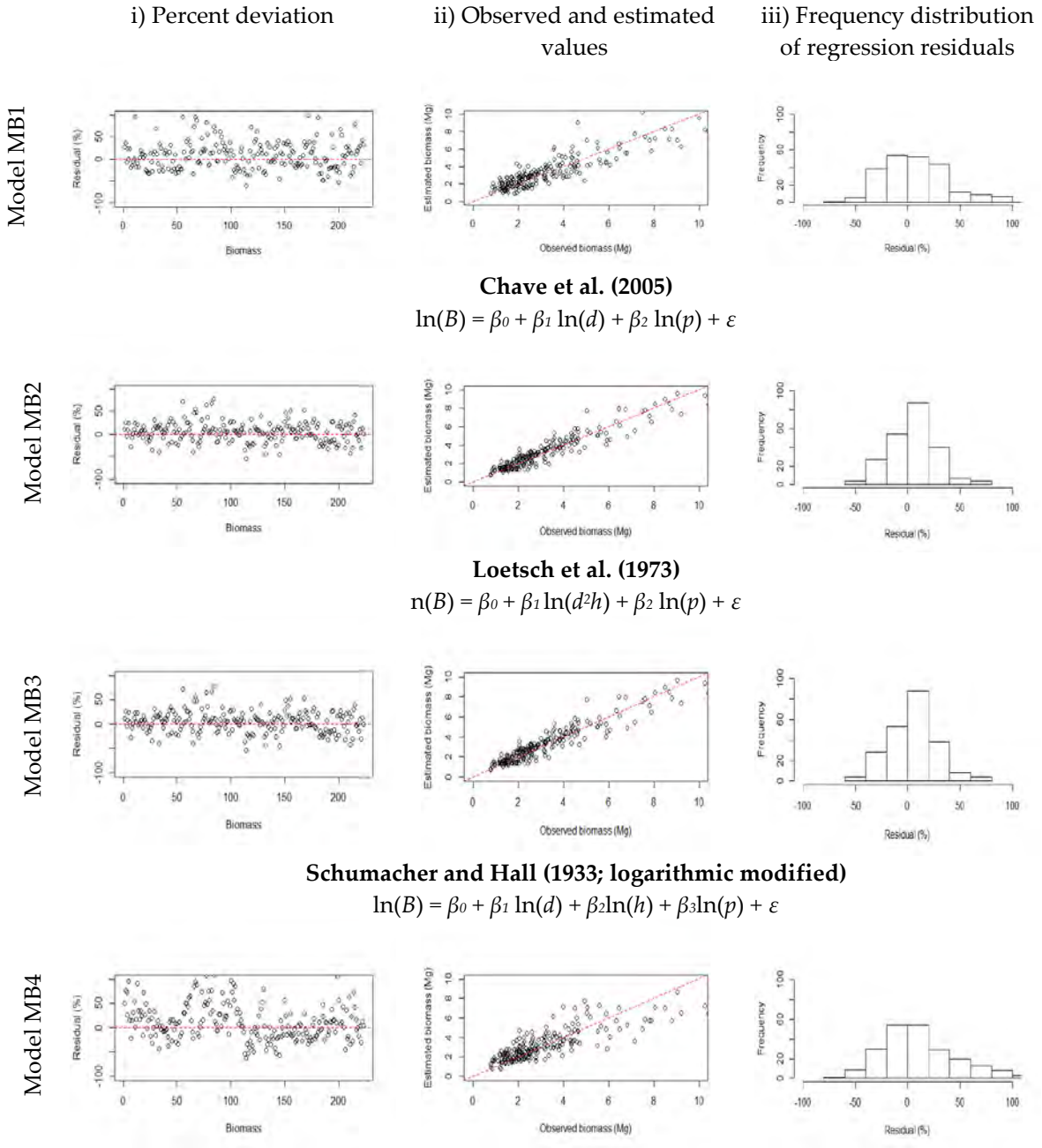
$V = \beta_0 (d^2 h)^{\beta 1} + \varepsilon$

Schumacher and Hall (1933)

$V = \beta_0 d^{\beta_1} h^{\beta_2} + \varepsilon$

Figure S3. Biomass models MB1-MB4 compared with other studies: Percent deviation, observed versus estimated values and regression residuals

Linear models for estimating bole biomass for twenty tree species sampled in a managed forest area in Acre state, Brazil.



Chave et al. (2005)

$$\ln(B) = \beta_0 + \beta_1 \ln(d) + \beta_2 \ln(p) + \varepsilon$$

Loetsch et al. (1973)

$$n(B) = \beta_0 + \beta_1 \ln(d^2h) + \beta_2 \ln(p) + \varepsilon$$

Schumacher and Hall (1933; logarithmic modified)

$$\ln(B) = \beta_0 + \beta_1 \ln(d) + \beta_2 \ln(h) + \beta_3 \ln(p) + \varepsilon$$

Schumacher and Hall (1933; logarithmic)

$$\ln(B) = \beta_0 + \beta_1 \ln(d) + \beta_2 \ln(h) + \varepsilon$$

Figure S4. Biomass models MB5-MB6 compared with other studies: Percent deviation, observed versus estimated values and regression residuals

Non-linear models for estimating bole biomass for twenty tree species sampled in a managed forest area in Acre state, Brazil.

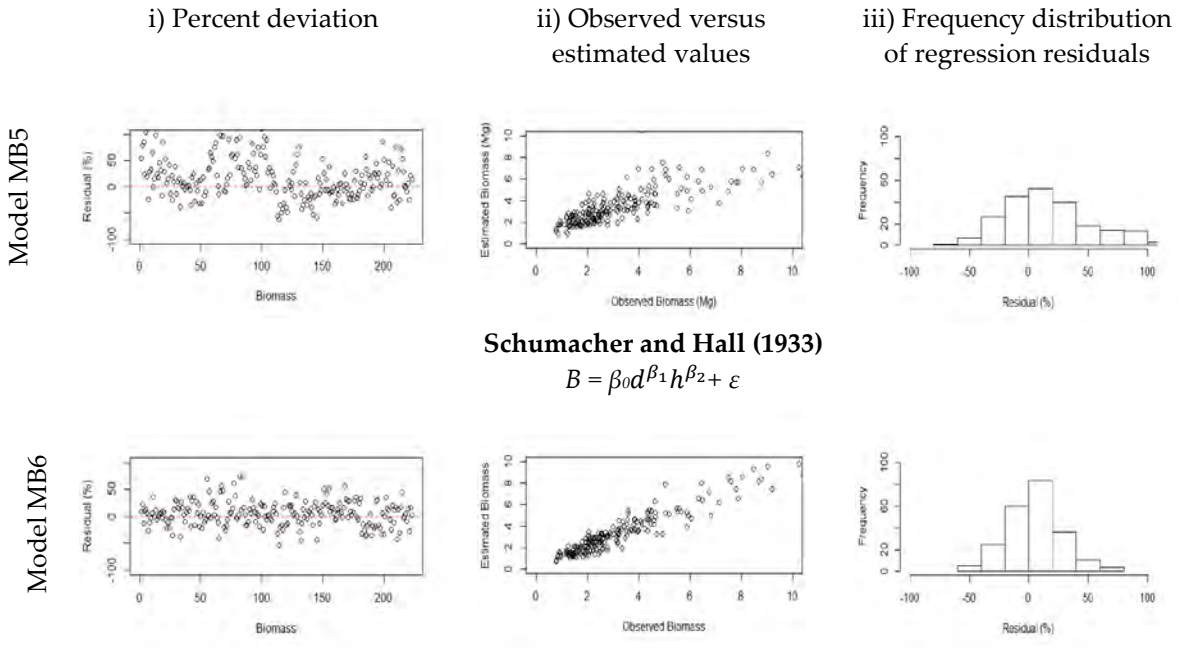
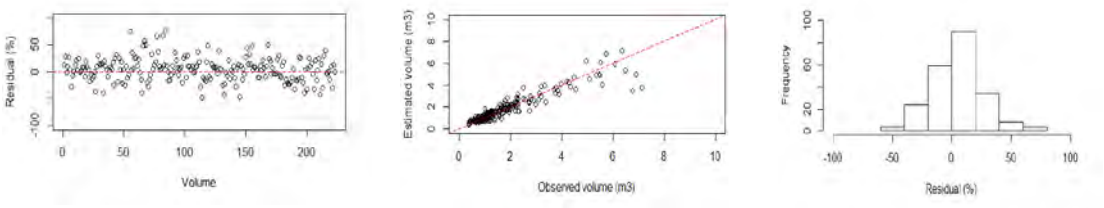


Figure S5. Carbon-stock models MC1-MC5 compared with other studies: Percent deviation, observed versus estimated values and regression residuals

Linear models for estimating bole carbon for twenty tree species sampled in a managed forest area in Acre state, Brazil.

i) Percent deviation | ii) Observed versus estimated | iii) Frequency distribution of regression residuals

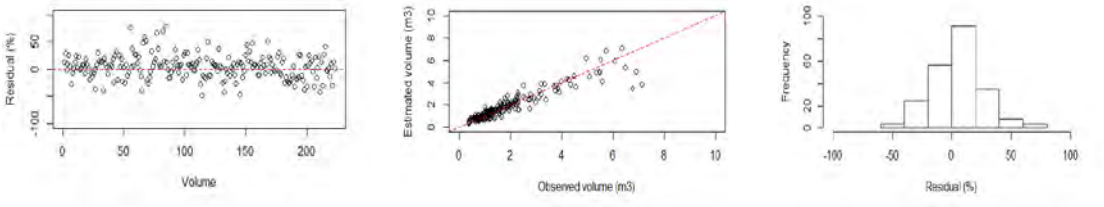
Model MC1



Schumacher and Hall (1933; modified)

$\ln(C) = \beta_0 + \beta 1\ln(d) + \beta 2\ln(h) + \beta 3\ln(p) + \beta 4\ln(t) + \varepsilon$

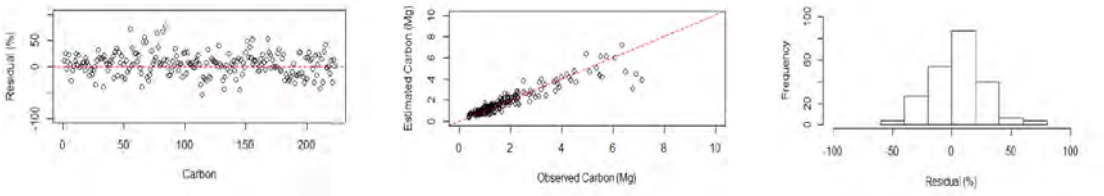
Model MC2



Loetsch et al. (1973; modified)

$\ln(C) = \beta_0 + \beta_1\ln(d^2h) + \beta_2\ln(p) + \beta_3\ln(t) + \varepsilon$

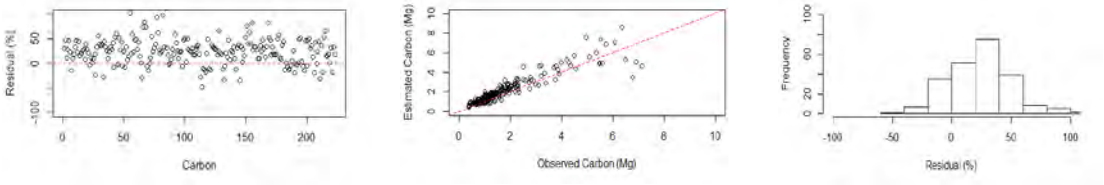
Model MC3



Loetsch et al. (1973; modified)

$\ln(C) = \beta_0 + \beta_1\ln(d^2h) + \beta_2\ln(pt) + \varepsilon$

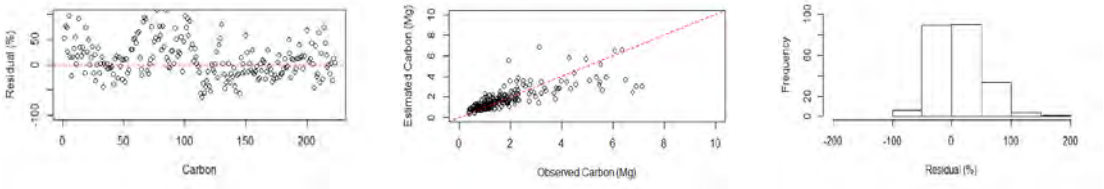
Model MC4



Schumacher and Hall (1933; logarithmic)

$\ln(C) = \beta_0 + \beta_1\ln(d) + \beta_2\ln(h) + \beta_3\ln(p) + \varepsilon$

Model MC5



Schumacher and Hall (1933; logarithmic)

$\ln(C) = \beta_0 + \beta_1\ln(d) + \beta_2\ln(h) + \varepsilon$

References

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