

Bibliography

- Albuquerque, D.** 2002. *Piquiá*. Belém, Embrapa Amazônia Oriental. 20 pp.
- Alechandre, A., Brown, I.F. & Gomes, C.V.** 1998. *Como fazer medidas de distância no campo: métodos práticos e de baixo custo para fazer medidas de distância no campo*. Rio Branco, Brazil, Biograf. 32 pp.
- Alencar, J.C.** 1981. Estudos silviculturais de uma população natural de *Copaifera multijuga* Hayne (leguminosae) na Amazônia central. *Acta Amazônica*, 11: 3–11.
- Alexiades, M.N.** 2002a. Cat's claw (*Uncaria guianensis* and *U. tomentosa*). In P. Shanley, A.R. Pierce, S.A. Laird & A. Guillen, *Tapping the green market: certification and management of non timber forest products*, pp. 93–110. London, Earthscan Publications. 456 pp.
- Alexiades, M.N.** 2002b. Ayahuasca (*Banisteriopsis* spp. and admixtures): appropriation and globalization of a sacred NTFP. In P. Shanley, A.R. Pierce, S.A. Laird & A. Guillen, *Tapping the green market: certification and management of non-timber forest products*, p. 297. London: Earthscan Publications. 456 pp.
- Almeida, A.W.B.** 1995. *As Quebradeiras de Coco Babaçu: identidade e mobilização*. São Luiz: Movimento Interestadual das Quebradeiras de Coco Babaçu. (Cadernos de Formação, 1)
- Almeida, S. C. B.** 1999. Avaliações Fenológicas de Quatro Espécies Arbóreas: *Ingá calantha* Ducke (Mimosaceae), *Hymenaea parvifolia* Huber, *Hymenaea courbaril* L. e *Copaifera multijuga* Hayne (Caesalpiniaceae). In PIBIC – CNPq, 8. *Seminário de Iniciação Científica Anais*. Rio Branco, Brazil.
- Amaral, P., Veríssimo, A., Barreto, P. & Vidal, E.** 1998. *Floresta para sempre: um manual para produção de madeira na Amazônia*. Belém, Brazil, Imazon. 155 pp.
- Amorex.** *Plano de manejo florestal simples para a extração do óleo de copaíba em três comunidades da resex Chico Mendes – Xapuri*. Rio Branco, Brazil, Amorex. Unpublished manuscript.
- Assies, W.** 1997. *Going Nuts for the Rainforest: non-timber forest products, forest conservation and sustainability in Amazônia*. Amsterdam: Thela Publishers. 96 pp.
- Associação dos seringueiros e agricultores da reserva extractivista do Juruá.** 1998. *Parteiras Tradicionais da Floresta*. Rio Branco, Brazil, Poronga Comunicações e Editoração.
- Baider, C.** 2000. *Demografia e ecologia de dispersão de frutos de Bertholletia excelsa Humb. & Bonpl. (Lecythidaceae) em castanhais silvestres da Amazônia Oriental*. Universidade de São Paulo, São Paulo, Brazil. (Ph.D. thesis)
- Balée, W.** 1989. The Culture of Amazonian Forests. In D.A. Posey & W. Balée, eds. *Resource Management in Amazonia: Indigenous and Folk Strategies. Advances in Economic Botany*, 7: 1–21.
- Balick, M.J.** 1986. Systematics and economic botany of the *Oenocarpus-Jessenia* (palmae) Complex. *Advances in Economic Botany*, 3: 1–140.
- Balick, M.J.** 1988a. *Jessenia and Oenocarpus: neotropical oil palms worthy of domestication*. Rome, Italy, FAO (Plant Production and Protection Paper, 88). 196 pp.
- Balick, M.J.** 1988b. The use of palms by the Apinayé and Guajajara Indians of northeastern Brazil. *Advances in Economic Botany*, 6: 65–90.

- Barbosa, W.C., Nazaré, R. F. R. & I. Nagata. 1979. Estudos físicos e químicos dos frutos: bacuri (*Platonia insignis*), cupuaçu (*Theobroma grandiflorum*) e murici (*Byrsonima crassifolia*). *Anais Cong. Bras. Frutic.* 5: 797-808.
- Bentes, R.S.; Marín, R.A; Emmi, M.F. 1988. Os cemitérios das castanheiras do Tocantins. *Pará Desenvolvimento*, 23: 18-23.
- Benton, D. 2002. Selenium Intake, Mood & Other Aspects of Psychological Functioning. *Nutritional Neuroscience*, 5(6): 363-74.
- Blaak, G. 1984. Processamiento de los frutos de la palmera Cucurita (*Maximiliana maripa*) In *Palmeras poco utilizadas de América Tropical*, pp.113-117. Turrialba, Costa Rica, FAO/CATIE.
- Blundell, A.G. 2004. A review of the CITES listing of big-leaf mahogany. *Oryx*, 38: 1-7.
- Bodley, J.H. & Benson, F.C. 1979. Cultural ecology of Amazonian Palms (Reports of investigations). Washington State University, USA. Laboratory of Anthropology. 85 pp.
- Bodmer, R.E. 1989. Frugivory in Amazonian artiodactyla: evidence for the evolution of the ruminant stomach. *Journal of Zoology*, 219: 457-467.
- Bodmer, R. E. 1993. *Managing wildlife with local communities: case of the reserva comunal Tamshiyacu-Tabuayo*. Case study 12b. Arlington, Virginia, USA, Liz Claiborne Art Ortenberg Foundation.
- Bodmer, R.E. & Ward, D. 2006. Frugivory in large mammalian herbivores. In K. Danell, ed. *The impact of large mammalian herbivores on biodiversity, ecosystem structure and function*, pp. 23-260. Cambridge, UK, Cambridge University Press.
- Boom, B.M. 1987. Ethnobotany of the Chacobo Indians. Beni, Bolívia. *Advances in Economic Botany*, 4: 1-69.
- Bovi, M.L.A. & De Castro, A.1993. Assaí In J.W. Clay & C.R. Clement, *Selected Species and Strategies to Enhance Income Generation from Amazonian Forests*. Rome, FAO Forestry Paper. 260 pp.
- Braga, R. 1976. *Plantas do Nordeste, Especialmente do Ceará*. 3rd edition. Fortaleza, Brazil, Imprensa official. 540 pp.
- Brightsmith, D. J. 2005. Parrot nesting in southeastern Peru: seasonal patterns and keystone trees. *Wilson Bulletin*, 177(3): 296-305.
- Brondízio, E.S. & Siqueira, A.D. 1997. From extractivists to forest farmers: changing concepts of agricultural intensification and peasantry in the Amazon estuary. *Research in Economic Anthropology*, 18: 233-279.
- Brondizio, E.S., Safar, C.C.M. & Siqueira, A.D. 2002. The urban market of Açaí fruit (*Euterpe oleracea* Mart.) and rural land use change: Ethnographic insights into the role of price and land tenure constraining agricultural choices in the Amazon estuary. *Urban Ecosystems*, 6(1/2): 67-98.
- Brondízio, E.S. 2008. *The Amazonian Caboclo and the Açaí Palm - Forest Farmers in the Global Market*. *Advances in Economic Botany*, 16. The New York Botanical Garden Press, NY, USA. 403 pp.
- Bryant, D., Nielsen, D. and Tanglely, L. 1997 *Last Frontier Forests: ecosystems and economies on the edge*. World Resources Institute, Washington D.C.
- Caldwell, J.P. & Myers, C.W. 1990. A new poison frog from Amazonian Brazil, with further revision of the quinquevittatus group of Dendrobates. *American Museum Novitates*, 2988: 1-21.

- Calzavara, B.B.G. 1970. Fruteiras: abeiro, abricozeiro, bacurizeiro, biribazeiro, cupuaçuzeiro. Série: *Culturas da Amazônia*, 1: 45–84.
- Castro, A. 1999. Buriti (*Mauritia flexuosa*), In J.W. Clay, P.d.T.B. Sampaio & C.R. Clement, eds. *Biodiversidade Amazônica - exemplos e estratégias de utilização (Amazonian biodiversity: examples and strategies for use)*, pp. 56–69. Manaus, Brazil, Sebrae-Amazonas, Programa de Desenvolvimento Empresarial e Tecnológico, Manaus. 409 pp.
- Carvalho, J.E.U., Müller, C.H. & Benchimol, R.L. 2007. *Uxizeiro: botânica, cultivo e utilização*. Belém, Brazil, Embrapa Amazonia Oriental.
- Carvalho, J.E.U., Nascimento & W.M.O., Muller, C.H. 1999. *Sistemas Alternativos para Formação de Mudanças de Bacurizeiro (Platonia insignis Mart.)*. Belém, Brazil, Embrapa. 5 p. (Comunicação Técnica 11).
- Carvalho, J.E.U., Alves, S.M., Nascimento, W.M.O. & Müller, C.H. 2002. Características físicas e químicas de um tipo de bacuri (*Platonia insignis* Mart.) sem sementes. *Rev. Bras. Frutic.*, 24(2): 573–575.
- Cavalcante, P.B. 1991. *Frutas Comestíveis da Amazônia*. 5. ed. Belém, Brazil: Museu Paraense Emílio Goeldi, 279 pp.
- Centro dos Trabalhadores da Amazônia, CTA. 1997. *Reserva extrativista de São Luís do Remanso: plano de manejo florestal de uso múltiplo recursos não-madeireiros*. Rio Branco, Brazil, CTA/CTACT da Amazônia.
- Chang, J. C., Gutenmann, W.H., Reid, C.M. & Lisk, D.J. 1995. Selenium content of Brazil nuts from two geographic locations in Brazil. *Chemosphere*, 30(4): 801–802.
- Clay, J. W. & Clement, C. R. 1993. *Selected Species and Strategies to Enhance Income Generation from Amazonian Forests*. Rome, FAO. 260 pp.
- Clay, J.W., Sampaio, P.d.T.B. & Clement, C.R., eds. 1999. *Biodiversidade Amazônica - exemplos e estratégias de utilização (Amazonian biodiversity: examples and strategies for use)*. Manaus, Brazil, Sebrae-Amazonas, Programa de Desenvolvimento Empresarial e Tecnológico, Manaus. 409 pp.
- Clement, C.R. 2008. Peach palm. In: Janick, J. & Paull, R.E., eds. *The Encyclopedia of Fruit and Nuts*. pp. 93–101. Wallingford, UK, CABI Publishing.
- Cochrane, M.A. & Laurence, W.F. 2002. Fire as a large-scale edge effect in Amazonian Forests. *Journal of Tropical Ecology*, 18: 311–325.
- Coelho, J.A. de M., Albuquerque, F.J.B. & Vasconcelos, T.C. 2004. As políticas públicas e os projetos de assentamento. *Estudos de Psicologia*, 9(1): 81–88.
- Conselho Nacional dos Seringueiros, CNS. 1993. *Diretrizes para um Programa de Reservas Extrativistas na Amazônia*. Rio Branco, Brazil.
- Costa, J.A. 2001. *Metodologia para manejo da espécie “açai” (Euterpe precatoria): um modelo para conservação da biodiversidade e incremento de renda em áreas extrativistas*. Rio Branco, Brazil, Pesacre/Sefe.
- Costa, J. A., Duarte, A. P. & the Indigenous Community of Apuriná 2002. *Metodologia para manejo comunitário da espécie “tucumã” (A. Aculeatum) na terra indígena Apuriná do km 45 da BR 317/AM – Brasil: um modelo replicável para conservação da biodiversidade e incremento da renda em áreas extrativas*. www.amazonlink.org/apurina.
- Cotta, J.N., Kainer, K.A., Wadt, L.H.O. & Staudhammer, C.L. 2008. Shifting cultivation effects on Brazil nut (*Bertholletia excelsa*) regeneration. *Forest Ecology and Management*, 256: 28–35.

- Credaro, A.** 2004. Global literacy in the 21st Century: Ataxia in the Republic of Letters? *Editorial Eye* 27 (4): 1-4. Available at *Warrior Librarian Weekly* http://warriorlibrarian.com/CURRICULUM/global_literacy.html
- Cruz, P.E. N., Marques, E.P. Amaya D.R. & J.A. Fáran.** 1984. Macaúba, bacuri, inajá e tucuma. Caracterização química e nutricional destes frutos do Estado do Maranhão e os óleos respectivos. *Rev. Química Industrial* (Outubro) 278-281.
- Cruz, T. A.** 2000. *Resistência e luta das mulheres da floresta: vales do Acre e Médio Purus (1988-1998)*. Rio Branco, Brazil, Fundação de Cultura e Comunicação Elias Mansour.
- Cuatrecasas, J. A.** 1964. Cacao and its allies. A taxonomic revision of the genus *Theobroma*. *Contr. U. S. Nat. Herb.*, 35(6): 379-605.
- Cymerys, M., Shanley, P. & Luz, L.** 1997. Quando a Caça Conserva a Mata. *Ciência Hoje*, 22(129): 22-24
- Dean, W.** 1989. *A Luta pela borracha no Brasil: um estudo de história ecológica*. São Paulo, Brazil, Nobel. 286 pp.
- de Carvalho, A.C.A. & de Queiroz, J.A.L.** In Press. Cipó-titica: Uma Fibra Vegetal que Vale Ouro.
- Del Pozo-Insfran, D., Percival, S.S. & Talcott, S.T.** 2006. Açai (*Euterpe oleracea* Mart.) polyphenolics in their glycoside and aglycone forms induce apoptosis of HL-60 leukemia cells. *J Agric Food Chem*, 54(4): 1222-9.
- Demers, C & Long, A.** 2006. *Steps to marketing timber*. University of Florida: School of Forest Resources and Conservation, Cooperative Extension Service Publication SS-FOR, n.17. <http://edis.ifas.ufl.edu/FR130>
- Denslow, J.L.** 1980. Tropical tree seedling dynamics: recruitment patterns and population consequences for canopy species. *Journal of Tropical Ecology*, 10: 369-383.
- Dias, A. S.** 2001. Consideraciones sociales y silviculturales para el manejo florestal diversificado en una comunidad ribereña. In Floresta Nacional do Tapajós, Amazonia Brasileira. Turrialba, Costa Rica. (MA thesis).
- Dirzo, R. & Raven, R.H.** 2003. Global state of biodiversity and loss. *Annual Review of Environmental Resources*, 28: 137-167.
- Durigan, C. C.** 1998. *Biologia e Extrativismo do Cipó-Titica (Heteropsis spp. - Araceae): estudo para avaliação dos impactos da coleta sobre a vegetação de Terra-Firme no Parque Nacional do Jaú*. 1998. Instituto Nacional de Pesquisas da Amazônia, Universidade do Amazonas, Manaus, Brazil. (MA Thesis)
- Emanuella Women's Association.** 2003. *Cipo Titica: Uso e Manejo*. (Pamphlet)
- Emmons, L.H.** 1990. *Neotropical rainforest mammals: a field guide*. Chicago, USA, The University of Chicago Press. 281 pp.
- Emmi, M.F.** 1987. *A Oligarquia do Tocantins e o Domínio dos Castanhais*. Belém: UFPA-NAEA, 196 pp.
- Estrella, E.** 1995. *Plantas medicinales Amazônicas: realidad y perspectivas*. Lima, Peru, TCA. 302 pp.
- Fadell, M.J.S.** 1997. *Viabilidade Econômica das Reservas Extrativistas Vegetais da Amazônica*. Universidade Federal de Viçosa: Viçosa, MG, Brazil 72 pp. (MA thesis).
- Faminow, M.D.** 1998. *Cattle, deforestation, and development in the Amazon: an economic, agronomic, and environmental perspective*. Wallingford, CT, USA, CAB International Publishers. 264 pp.

- FAO. 1987. *Espécies Forestales Productoras de Frutas y Otros Alimentos: ejemplos de América Latina*. Rome. 241 pp.
- FAO. 2009. FAOSTAT. FAO statistics division. www.faostat.fao.org
- Faria, L.G. F. & Costa, C.M.L., eds. 1998. Tópicos Especiais em Tecnologia de Produtos Naturais. Belém: UFPA, Numa, Poema. (*Série Poema*, 7).
- Ferreira, L. A. 1999. *Potencial de Extração e Comercialização do Óleo-Resina de Copaíba (Copaífera spp.): um Estudo de Caso na Floresta Estadual do Antimary, Acre*. Ufac/Propeg, Rio Branco, Brazil (MA Thesis).
- Galuppo, S.C. 2004. *Valorização do piquiá (Caryocar villosum) e amapá-doce (Brosimum parinarioides) para a comunidade de Piquiatuba: Flona do Tapajós*. Universidade Federal Rural da Amazônia, Belém, Brazil. (MA thesis).
- Gomes-Silva, D.A.P. 2001. *Relatório Final de Avaliação Ecológica da Exploração de Patauá (Oenocarpus bataua Mart) por Populações Tradicionais no Estado do Acre e Geração de Subsídios Técnicos para Elaboração do Plano de Manejo Preliminar*. Rio Branco: Sefe.
- Grogan, J, Barreto, P. & Veríssimo, A. 2002. *Mogno na Amazônia Brasileira: Ecologia e Perspectivas de Manejo*. Belém, Brazil, Imazon, 64 pp.
- Grogan, J. & Barreto, P. 2005. Big-leaf mahogany on CITES Appendix II: big challenge, big opportunity. *Conservation Biology*, 19: 973–976.
- Gross, D. 1990. Protein Capture and Cultural Development in the Amazon Basin. *American Anthropologist*, 3(77): 526–549.
- Gruenwald, J. A. 1998. Tourism in South America. *Newsletter of the Multidisciplinary Association for Psychedelic Studies (MAPS)*, 8(3).
- Gullison, R.E., Panfil, S.N., Strouse, J.J. & Hubbell, S.P. 1996. Ecology and management of mahogany (*Swietenia macrophylla* King) in the Chimanes Forest, Beni, Bolivia. *Botanical Journal of the Linnean Society*, 122: 9–34.
- Heitzman, M.E., Neto, C.C., Winiarz, E., Vaisberg, A.J. & Hammond, B.G. 2005. Ethnobotany, phytochemistry and pharmacology of *Uncaria* (Rubiaceae). *Phytochemistry*, 66(1): 5–29.
- Henderson, A. 1995. *The Palms of the Amazon*. New York, NY, USA, Oxford University Press. 388 pp.
- Herrero-Jáuregui, C. García-Fernández, C., Sist, P. & M. A. Casado. 2009. Conflict of use for multi-purpose tree species in the state of Pará, eastern Amazonia, Brazil. *Biodiversity and Conservation* 18 (4): 1019-1044
- Hoffman, B. 1997. *The Biology and Use of Nibbi Heteropsis Flexuosa (Araceae): the Source of an Aerial root fiber product in Guyana*. Florida International University, Miami, FL, USA. (MS thesis)
- Homma, A.K.O. 2000. *Cronologia da Ocupação e Destruição dos Castanhais no Sudeste Paraense*. Belém, Brazil, Embrapa Amazônia Oriental, 132 pp.
- Hughes, K. & Worth, T. 1999. *Cat's Claw*. New Crop Fact Sheet, Purdue University Center for New Crops and Plant Products. www.hort.purdue.edu/newcrop/CropFactSheets/cats-claw.html#Crop
- IBGE (Instituto Brasileiro de Geographia e Estatística). 1999. *Estudo Nacional de Despesa Familiar (Endef). Tabelas de Composição de Alimentos*. 5. ed. Rio de Janeiro, Brazil. 137 pp.
- IBGE. 2000. *Censo Demográfico, Dados Distritais: XI Recenseamento Geral do Brasil 2000, Brasília, Brazil*: Brazilian Institute of Geography and Statistics.

- IBGE. 2002. *Produção da Extração Vegetal e da Silvicultura*. <http://www.ibge.net/home/estatística/economia/pevs/tabela1apevs.shtm>
- IBGE 2006. *Produção da Extração Vegetal e da Silvicultura*. Instituto Brasileiro de Geografia e Estatística (IBGE). Rio de Janeiro, Brazil. www.ibge.gov.br
- IBGE 2007. *Produção da Extração Vegetal e da Silvicultura*. Instituto Brasileiro de Geografia e Estatística (IBGE). Rio de Janeiro, Brazil. www.ibge.gov.br
- Jardim, M.A.G. 1995. *Cartinha Informativa sobre a Palmeira Açai (Euterpe oleracea Mart.)*. Belém: Museu Paraense Emílio Goeldi. 11 pp.
- Jardim, M. A.G. 1996. Aspectos da Produção Extrativista do Açazeiro (*Euterpe Oleracea Mart.*) no Estuário Amazônico. Belém: Museu Paraense Emílio Goeldi. (*Boletim do Museu Goeldi, Série Botânica* 12).
- Jardim, M.A.G. 2000. *Morfologia e Ecologia do Açazeiro Euterpe oleracea Mart. E das Etnovariiedades Espada e Branco em Ambientes de Várzea do Estuário Amazônico*. Belém: Museu Paraense Emílio Goeldi/Embrapa.
- Johns, J., Barreto, P. & Uhl, C. 1998. *Os danos da exploração de madeira com e sem planejamento na Amazônia Oriental*. Série Amazônia N°16. Belém: Imazon. 18 pp.
- Jones, K. 1995. *Cat's Claw: healing vine of Peru*. Washington, USA, Sylvan Press.
- Kahn, F. & Moussa, F. 1999. Economic importance of *Astrocaryum aculeatum* (Palmae) in Central Brazilian Amazonia. *Acta Botanica Venezuelica*, 22(1): 237–245.
- Kainer, K.A., Duryea, M.L., de Macêdo, N.C. & Williams, K. 1998. Brazil nut seedling establishment and autecology in extractive reserves of Acre, Brazil. *Ecological Applications*, 8: 397–410.
- Kainer, K.A., Wadt, L.H.O. & Staudhammer, C.L. 2007. Explaining variation in Brazil nut fruit production. *Forest Ecology and Management*, 250: 244–255.
- Kanashiro, M., Thompson, I.S., Yared, J.A.G., Loveless, M.D., Coventry, P., Martins-da-Silva, R.C.V., Degen, B. & Amaral, W. 2002. Improving conservation values of managed forests: the Dendrogene Project in the Brazilian Amazon. *Unasylva*, 53. 209 pp. www.fao.org/docrep/004/y3582e/y3582e06.htm#f
- Kerr, L.S., Clement, R.N.S., Clement, C.R. & Kerr, W.E. 1997. *Cozinhando com a Pupunha*. INPA, Manaus. 95 pp.
- Klimas, C.A. 2010. Modeling compatibility of timber and non-timber harvests off a multipurpose Amazonian species: assessing sustainability through ecological and economic analyses. PhD dissertation, University of Florida, Gainesville.
- Labate. B.C. & Araújo, W.S. 2002. *O uso ritual de ayabausca*. Mercado de letras, São Paulo, Brazil.
- Laurance, W.F. & Fearnside, P.M. 2002. Issues in Amazonian development. *Science*, 295: 1643–1644.
- Leite, A., Alechandre, A., Rigamonte-Azevedo, C., Campos, C. A. & Oliveira, A. 2001. *Recomendações para o manejo sustentável do óleo de copaíba*, UFAC/SEFE: Rio Branco. 38 pp.
- Lentini, M., Pereira, D. & Veríssimo, A., 2005. *Fatos Florestais da Amazonia*. Belém, PA, Brazil, IMAZON. <http://www.imazon.org.br>
- Levi-Straus, C. O. 1997. Uso das Plantas Silvestres da América tropical. In B.G. Ribeiro, (Coord.) *Suma Etnológica Brasileira*. Belém: UFPA.

- Lima, M.C.C.** 1987. *Atividade de Vitamina A do Doce de Buriti (Mauritia vinifera Mart.) e Seu Efeito no Tratamento e Prevenção da Hipovitaminose A em Crianças*. 125 pp. Universidade Federal da Paraíba, João Pessoa, Brazil. (MS thesis)
- Lima, M.d.C.** (ed.) 2007. *Bacuri: Agrobiodiversidade*. Sao Luís, Brazil, Instituto Interamericano de Cooperação para a Agricultura (IICA). 210 pp.
- Lleras, E. E. & Coradin, L.** 1988. Native Neotropical oil Palm: state of the art and perspectives for Latin America. *Adv. Econ. Bot.*, 6: 201–213.
- Londres, M.** 2009. Population Structure and Seed Production of *Carapa guianensis* in Three Floodplain Forest Types of the Amazon estuary. Master Thesis. University of Florida, School of Forest Resources and Conservation, FL, USA.
- Lubek, W.** 1995. *O Poder Terapêutico do Ipê-roxo: a árvore divina dos xamãs da América do Sul*. São Paulo: Madras, 124 pp.
- Maas, P.J.M. & Westra, L.Y.Th. & collaborators.** 1992. Rollinia (Annonaceae). *Flora Neotropica Monograph* 57: 1–188.
- MacDonald, T.** (Director). 2004. *Daughters of the Canopy* (Documentary Film) Canopy Productions, New York, NY. USA.
- Maceil, R.C.G., Saldanha, C.L. & Batista, G.E.A.** 2000. Avaliação das Ilhas de Alta Produtividade: plantio de seringueira na floresta natural. In Congresso Brasileiro de Sistemas Agroflorestais: manejando a biodiversidade e compondo a paisagem rural. Manaus: Embrapa Amazônia Ocidental, 433–435 pp. (Documentos 7).
- Martini, A., Rosa, N. & Uhl, C.** 1994. An attempt to predict which Amazonian tree species may be threatened by logging activities. *Environmental Conservation*, 21: 152–162.
- Martini, A., Rosa, N. A. & Uhl, C.** 1998. Espécies de Árvores Potencialmente Ameaçadas pela Atividade Madeireira na Amazônia. Belém: Imazon, (*Série Amazônia*, 2).
- Marx, F., Andrade, E.H.A., Zoghbi, M.G.B. & Maia, J.G.S.** 2002. Studies of edible Amazonian plants. Part 5: Chemical characterisation of Amazonian Endopleura uchi fruits. *Eur Food Res Technol*, 214: 331–334.
- Mascarenhas, B.M., Lima, M.d.F.C. & Overal, W.L.** 1992. *Animais da Amazônia: guia zoológico do Museu Paraense Emílio Goeldi*. Belém, Brazil, Editora Supercores. 113 pp.
- Mattos, M., Nepstad, D. & Vieira, I. C.** 1992. *Cartilha sobre Mapeamento de Área, Cubagem de Madeira e Inventário Florestal*. Belém, Brazil, IPAM.
- Maués, M.M. & Venturieri, G.C.** 1996. Ecologia da Polinização do Bacurizeiro (*Platonia insignis Mart.*) Clusiaceae. Belém: Embrapa-CPATU. 24 pp. (*Boletim de pesquisa*, 170).
- Maués, M.M. & Venturieri, G.C.** 1997. Pollination ecology of *Platonia Insignis* mart. (Clusiaceae), a fruit tree from Eastern Amazon region. *Acta Hort. (ISHS)* 437: 255–260.
- Mchargue, L.A. & Hartshorn, G.S.** 1983. Seed and seedling ecology of *Carapa guianensis*. *Turribalba*, 33(4): 399 - 404.
- Medina, G.** 2004. Ocupação Cabocla e Extrativismo Madeireiro no Alto Capim: estratégias de reprodução camponesa. *Acta Amazônica* 34(2): 309-318.
- Medina, G. & Ferreira, S.** 2004. Bacuri (*Platonia Insignis* Martius), the Amazonian fruit that has become gold. In: M.N. Alexiades & P. Shanley, eds. *Forest products, livelihoods and conservation: case studies of non-timber forest product systems*. Indonesia: CIFOR, (Latin America, v. 3).

- Mejia, K. 1992 Las Palmeras em los Mercados de Iquitos. *Bull. Inst. Fr. D'Études Andines*, 2(21): 755–769.
- Mello, R. A., Viana, V. M., Morais, L. M. & Mendes, N. T. 1998. Ecologia e Manejo da Castanha do Pará Em Reservas Extrativistas No Xapuri-Acre. Floresta Amazônica: Dinâmica, regeneração e Manejo, pp. 277–293. In C. Gascon & P. Moutinho, eds. *Floresta Amazônica: dinâmica, regeneração e manejo*. Manaus: Ipam/Inpa.
- Michalski, F., Peres, C. A. and Lake, I. R. 2008. Deforestation dynamics in a fragmented region of southern Amazonia: evaluation and future scenarios. *Environmental Conservation* 35 (2): 93–103.
- Miller, C. 1990. *Natural History, Economic Botany, and Germplasm Conservation of the Brazil Nut Tree (Bertholletia excelsa Humb. and Bonpl.)*. University of Florida (MA thesis).
- Miller, C. 2002. Fruit production of the unguahua palm (*Oenocarpus bataua* subsp. *bataua*, Arecaceae) in an indigenous managed reserve. *Economic botany*, 56(2): 165–176.
- Millken, W., Miller, R.P., Pollard, S.R. & Wandelli, E.D. 1992. *Ethnobotany of the Waimiri Atroari Indians of Brazil*. Kew, UK, Royal Botanic Gardens. 146 pp.
- Ming, L.C., Gaudêncio, P. & Santos, V.P. 1997. *Plantas medicinais: uso popular na reserva extrativista "Chico Mendes" - Acre*. Botucat, Brazil, CEPLAN/UNESP. 165 pp.
- Miranda, E.M., Souza, J.A. & Persira, R.C.A. 2001. *Subsídios Técnicos para o Manejo Sustentável da unha-de-gato (Uncaria spp.) no Vale do Rio Juruá-AC*. Rio Branco, Brazil Embrapa. 21 pp. (Documentos, 68).
- Mora Urpí, J., Weber, J.C. & Clement, C.R. 1997. Peach palm. *Bactris gasipaes* Kunth. Promoting the conservation and use of underutilized and neglected crops. 20. Institute of Plant Genetics and Crop Plant Research - IPK, Gatersleben/International Plant Genetic Resources Institute - IPGRI, Rome, Italy. 83pp. www.ipgri.cgiar.org/publications/pdf/155.pdf
- Mora Urpí, J. & Gainza Echeverría, J., eds. 1999. Palmito de pejiabaye (*Bactris gasipaes* Kunth): Su cultivo e industrialización. Editorial Universidad de Costa Rica, San José, Costa Rica.
- Moreira, G. C., Morais, A. V. & Matias, J. G. N. 1998. O Óleo de Buriti como Protetor Solar. *O Jornal da Ciência*.
- Mori, S. A. 1992. Brazil nut industry – past, present, and future. In M. Plotkin & L. Famolare, L., eds. *Sustainable harvest and marketing of rain forest products*, pp. 241–251. Corvelo, CA, USA, Island Press. 340pp.
- Moro, J. 1993. *Fronteiras de Sangue: a saga de Chico Mendes*. São Paulo, Brazil, Scritta. 439 pp.
- Müller, C.H. 1995. A Cultura da Castanha-do-brasil. Brasília: Embrapa-SPI-CPATU, (*Coleção Plantar*, 23).
- Murrieta, R. S. S., Dufour, D. L. & Siqueira, A. D. 1999. Food consumption and subsistence in three Caboclo populations on Marajo Island, Amazonia, Brazil. *Human ecology*, 27: 455–475.
- Nepstad, D.C., A. Verissimo, Alencar, A., Nobre, C., Lima, E., Lefebvre, P., Schlesinger, P., Potter, C., Moutinho, P., Mendoza, E., Cochrane, M. & Brooks, V. 1999. Large-scale impoverishment of Amazonian forests by logging and fire. *Nature*, 398: 505–508.
- Nepstad, D., Azevedo-Ramos, C. Lima, E. McGrath, D. Pereira, C. & Merry, F. 2004. Managing the Amazon timber industry. *Conservation Biology*, 18(2): 575–577.

- Nepstad, D.C., Stickler, C.M. & Almdeida, O.T. 2006. Globalization of the Amazon soy and beef Industries: opportunities for conservation. *Conservation Biology*, 20(6): 1595–1603.
- Nepstad, D.C., Stickler, C.M., Soares-Filho, B. & Merry, F. 2008. Interactions among Amazon land use, forests and climate: prospects for a near-term forest tipping point *Phil. Trans. R. Soc. B*, 363(1498): 1737–1746. <http://rstb.royalsocietypublishing.org/content/363/1498/1737.full>
- Neves, C.A. 1981. *A Seringueira*. Rio Branco, Brazil, Emater-Acre.
- Newing, H. & Harrop, S. 2000. European Health Regulations and Brazil Nuts: implications for biodiversity conservation and sustainable rural livelihoods in the Amazon. *Journal of International Wildlife Law & Policy*, 2(3): 109–124.
- Oglethorpe, J., Brooks, D.M., Bodmer, R.E. & Matola, S. 1997. *Tapirs: Status Survey and Conservation Action Plan* IUCN/SSC. 164 pp.
- O Liberal. 1998. *O Aedes que se Cuide*. Belém, Brazil. April 14. 1 p.
- Oliveira, A. C. A. 2000. *Efeitos do Bambu Guadua weberbaueri Pilger sobre a Fisionomia e Estrutura de uma Floresta no Sudoeste da Amazônia*. INPA/UA, Manaus, Brazil. 82 pp. (MS thesis)
- Ortiz, E.G. 2002. Brazil Nut (*Betholletia excelsa*). In P. Shanley, A.R. Pierce, S.A. Laird & A. Guillen, *Tapping the green market: certification and management of non timber forest products*, pp. 61–74. London, Earthscan Publications.
- Pacheco, J. F. & Agne, C.E.Q. 2010. Species lists of birds for South American countries and territories. www.museum.lsu.edu/~Remsen/SACCCountryLists.html [version 18 March 2010]
- Padoch, C. 1988. Aguaje (*Mauritia flexuosa* L. f.) in the Economy of Iquitos, Peru. *Advances in Economic Botany*, 6: 214–224.
- Padoch, C., E. Brondizio, S. Costa, M. Pinedo-Vasquez, R. R. Sears & A. Siqueira. 2008. Urban forest and rural cities: multi-sited households, consumption patterns, and forest resources in Amazonia. *Ecology and Society*, 13(2): 2. www.ecologyandsociety.org/vol13/iss2/art2/
- Paula-fernandes, N. M. 2001. *Estratégias de Produção de Sementes e Estabelecimento de Plântulas de Mauritia flexuosa L. f. (Arecaceae) no Vale do Acre/Brasil*. FUA/INPA, Manaus, Brazil 207 pp. (PhD thesis)
- Pedersen, H.B. & Balslev, H. 1993. *Palmas Útiles: especies ecuatorianas para agroforestería y extractivismo*. Quito-Ecuador: ABYA-YAALA.
- Peneiredo, F. M. 2002. Receitas para se fazer com Patauá. Rio Branco, Brazil. 10 maio 2002, interview with Daisy Gomes.
- Pennington, T.D. 1990. Sapotaceae. *Flora Neotropica Monograph*, 52: 1–770.
- Pennington, T.D. 1997. *The Genus Inga: Botany*. London, Kew: Royal Botanic Gardens. 854 pp.
- Pereira, L.A. 2001. Manejo de Cipó-Títica *Heteropis Flexuosa* (H.B.K.) G.S. Bunting (*Araceae*): uma perspectiva viável à sustentabilidade do Amapá. In V. Congresso de Ecologia do Brasil, Porto Alegre/RS. V Congresso de Ecologia do Brasil, RS, Brazil.
- Pereira, P.G. 1951. O Óleo de Patauá. *Boletim Técnico do Instituto Agrônômico do Norte*, 23: 67–77.
- Peres, C.A., Baider, C., Zuidema, P.A., Wadt, L.H.O., Kainer, K.A., Gomes-Silva, D.A.P., Salomão, R.P., Simões, L.L., Franciosi, E.R.N., Cornejo Valverde, F., Gribel, R., Shepard Jr., G.H., Kanashiro, M., Coventry, P., Yu, D.W., Watkinson, A.R. & Freckleton, R.P. 2003. Demographic Threats to the Sustainability of Brazil Nut Exploitation. *Science*, 302: 2112–2114.

- Pesce, C. 1941. *Oleaginosas da Amazônia*. Belém, Brazil, Oficinas Gráficas da Revista Veterinária.
- Pio Correa, M. 1926. *Dicionário das Plantas Úteis do Brasil e das Exóticas Cultivadas*. Rio de Janeiro, Brazil, Imprensa Nacional, ed.1. 4325 pp.
- Plowden, C. 2001. *The ecology, management and marketing of non-timber forest products in the Alto Rio Guamá indigenous reserve (Eastern Brazilian Amazon)*. Pennsylvania State University, University Park, PA. USA (PhD thesis).
- Plowden, C, Uhl, C. & Oliveira, F. de A. 2003. The ecology and harvest potential of titica vine roots (*Heteropsis flexuosa*:Araceae) in the eastern Brazilian Amazon. *Forest Ecology and Management*, 182(1):59–73.
- Plowden, C. 2004. The ecology and harvest of andiroba seeds for oil production in the Brazilian Amazon, *Conservation & Society*, 2(2):251–272. http://conservationandsociety.org/c_s_2-2-4-plowden-new.pdf
- Pollak, H., Mattos, M. & Uhl, C. 1997. O Perfil da Extração de Palmito no Estuário Amazônico. Belém: Imazon. *Série Amazônia*, 3. 39 pp.
- Posey, D.A. 1985. Indigenous management of tropical forest ecosystems: the case of the Kayapó Indians of the Brazilian Amazon. *Agroforestry Systems*, 2(3): 139–158.
- Poulet, D. 1998. *Açaí: estudo da cadeia produtiva fruto e palmito*. Macapá, Brazil, Instituto de Pesquisas Científicas e Tecnológicas do Estado do Amapá.
- Powell, A.H. & G.V.N. Powell. 1987. Population dynamics of male Euglossine bees in Amazonian forest fragments. *Biotropica*, 19(2): 176–179.
- Pozzoban, J. 2002. *Vocês, Brancos, Não Têm Alma: histórias de fronteiras*. Belém, Brazil, EDUFPA-MPEG.
- Prance, G.T. & Silva, M.F. 1973. Caryocaraceae. *Flora Neotropica Monograph*, 2: 1–75.
- Raffles, H. 2002. In *Amazonia: a natural history*. Princeton, NJ, USA, Princeton University Press. 288 pp.
- Ramos, C.M.P. & Bora, P.S. 2003. Extraction and Functional Characteristics of Brazil Nut (*Bertholletia excelsa* HBK) Globulin. *Food Science and Technology International*, 9(4): 265–269.
- Richmond, M., Robinson, C. & Sachs-Israel, M. 2008. The Global Literacy Challenge: a profile of youth and adult literacy at the mid-point of the United Nations Literacy Decade 2003–2012. Paris, UNESCO. 79 pp. <http://unesdoc.unesco.org/images/0016/001631/163170e.pdf>
- Rios, M., Martins da Silva, R.C.V., Sabogal, C., Martins, J., da Silva, R.N., de Brito, R.R., de Brito, I.M., Costa de Brito, M.F., da Silva, J.R. & Ribeiro, R.T. 2001. *The benefits of plants from secondary forests to the community of Benjamin Constant in Para State, Brazilian Amazon*. Belém, Brazil, CIFOR. 54 pp.
- Rocha, A.A. 2001. *Subsídios Técnicos para Elaboração do Plano de Manejo de Copaíba (Copaífera spp.)*. Acre, Brazil, Sefe.
- Rocha, E. 2001. *Avaliações do Potencial Ecológico de Euterpe pectorata Mart. (Açaí)*. Rio Branco, Brazil, Sefe.
- Roche, E. 2004. Potencial ecológico para o manejo de frutos de açaizeiro (*Euterpe pectorata* Mart.) em áreas extrativistas no Acre, Brasil. *Acta amazonica*, 34(2): 237–325.
- Salomão, R.P. 1991. Estrutura e Densidade de *Bertholletia excelsa* H.&B. (“Castanheira”) nas Regiões de Carajás e Marabá, no Estado do Pará. Belém, Brazil, Museu Paraense Emilio Goeldi. *Serie Botanica*, 7.

- Santos, L. M. P. 2005. Nutritional and ecological aspects of buriti or aguaje (*Mauritia flexuosa* Linnaeus filius): A carotene-rich palm fruit from Latin America. *Ecology of Food and Nutrition*, 44(5): 345–358.
- Savelle, W. & Eshee, W.D. 2002. *Marketing your timber: the timber sales agreement*. Mississippi, USA, Mississippi State University Extension Service Publication. <http://msucares.com/pubs/publications/p1855.htm>
- Schmink, M. & Wood, C.H. 1992. *Contested Frontiers in Amazonia*. New York, NY, USA, Columbia University Press. 387 pp.
- Schroth, G., Coutinho, P., Moraes, V.H.F. & Albernaz, A.L. 2003. Rubber agroforests at the Tapajós River, Brazilian Amazon - environmentally benign land use systems in an old forest frontier region. *Agriculture, Ecosystems and Environment*, 97: 151–165.
- Schroth, G., da Mota, M. S. S., Lopes, R. & de Freitas, A.F. 2004. Extrative use, management and *in-situ* domestication of a weedy palm, *Astrocaryum tucuma*, in the Central Amazon, Forest Ecology and Management. *Forest Ecology and Management*, 202: 161–179.
- Schulze, M. 2003. *Ecology and behavior of nine timber species in Pará, Brazil: links between species life history and forest management and conservation*. Pennsylvania State University, University Park. (PhD dissertation)
- Schulze, M., Vidal, E., Grogan, J., Zweede, J. & Zarin, D. 2005. Madeiras nobres em perigo: práticas e leis atuais de manejo florestal não garantem a exploração sustentável. *Ciência Hoje*, 36: 66–69.
- Schulze, M. 2008. Technical and financial analysis of enrichment planting in logging gaps as a potential component of forest management in the eastern Amazon. *Forest Ecology and Management*, 255: 866–879.
- Schulze, M., J. Grogan, C. Uhl, M. Lentini & E. Vidal. 2008a. Evaluating Ipê (Tabebuia, Bignoniaceae) logging in Amazonia: sustainable management or catalyst for forest degradation? *Biological Conservation*, 141: 2071–2085.
- Schulze, M., Grogan, J., Landis, R.M., & Vidal, E. 2008b. How rare is too rare to harvest? Management challenges posed by timber species occurring at low densities in the Brazilian Amazon. *Forest Ecology and Management*, 256: 1443–1457.
- SECEX (Secretariat of External Commerce). 2008. Brazilian Ministry of Development, Industry and Commerce (MDIC), External Commerce Information Analysis System via <http://aliceweb.desenvolvimento.gov.br/> [accessed July 2008].
- Secretaria de Estado da Fazenda. 2008. *Boletim de Preços Mínimos de Mercado Madeira*. Pará, Brazil. www.sefa.pa.gov.br
- Serra, M., Shanley, P., Melo, T., Fantini, A., Medina., Viera, P. 2010. From the forest to the consumer: the ecology, local management and trade of *amapá amargoso* *Parahancornia fasciculata* (Poir) Benoist in the state of Pará. In Albuquerque, U.P. Hanazaki, N. eds., Recent developments and case studies in ethnobotany. Recife. Sociedade Brasileira de Etnobiologia. Núcleo de Publicações em Ecologia e Etnobotânica Aplicada, p. 213–231.
- Shanley, P., Hohn, I. & Silva, A. V. 1996. *Receitas sem palavras: plantas medicinais da Amazônia*. Belém: WHRC, Embrapa, 48 pp.
- Shanley, P. 2000. *As the Forests Falls: the Changing Use, Ecology and Value of Non-Timber Forest Resources for Caboclo Communities in Eastern Amazonia*. Canterbury, UK, The University of Kent. 211 pp. (PhD thesis)

- Shanley, P., Pierce, A. R., Laird, S.A. & S. Guillen, A. 2002. *Tapping the green market: certification and management of non timber forest products*. London, Earthscan Publications. 456 pp.
- Shanley, P., Luz, L. & Cymerys, M. 2002. The interface of timber and non-timber resources: declining resources for subsistence livelihoods (Brazil). In P. Shanley, A.R. Pierce, S.A. Laird & A. Guillen, *Tapping the green market: certification and management of non timber forest products*, pp. 313–321. London, Earthscan Publications. 456pp.
- Shanley, P. 2003. Chainsaws in the drugstore. *Appropriate Technology*, 30(3): 60–63.
- Shanley, P. & Luz, L. 2003. Impacts of forest degradation on medicinal plant use and implications for health care in Eastern Amazonian. *BioScience*, 53(6): 573–584.
- Shanley, P. & Rosa, N. 2004. Eroding Knowledge: An Ethnobotanical Inventory in Eastern Amazonia's Logging Frontier. *Economic Botany*, 58(2):135–160.
- Shanley, P. & Gaia, G. 2004. Poor Man's Fruit Turns Profitable: *Endopleura uchi* in managed groves near Belém, Brazil. In M.N. Alexiades & P. Shanley, P, eds. *Forest products, livelihoods and conservation: case studies of non-timber forest product systems*. Indoneisa: CIFOR, (Latin America, v. 3).
- Shanley, P., Pierce, A. Laird, S. & Robinson, D. 2008. *Beyond Timber: Certification and Mangement of Non-Timber Forest Products*. CIFOR/Forest Trends, Bogor, Indonesia. 68 pp.
- Silvius, K., Bodmer, R.E. & Fragoso, J.M.V. 2004. *People in Nature: Wildlife Conservation in South and Central America*. Columbia University Press. 464 pp.
- Simmons, C.S., Walker, R.T., Arima, E.Y. Aldrich, S.P. & Caldas, M.M. 2007. The Amazon land war in the south of Pará. *Annals of the Association of American Geographers*, 97(3): 567–592.
- Smith, H.H. 1897. *Brazil, the Amazons and the coast*. C. Scribner's Sons, New York.
- Smith, J., Ferreira, M. do S., Van de Kop, P., Ferreira, C. A. P. & Sabogal, C. 2000. Cobertura Florestal Secundária em Pequenas Propriedades Rurais na Amazônia: implicações para a agricultura de corte e queima. Belém, Brazil, Embrapa Amazônia Oriental, 43 pp. (*Documentos* 51).
- Smith, J., Ferreira, S., van de Kop, P., Ferreira, C.P. & Sabogal, C. 2003. The persistence of secondary forests on colonist farms in the Brazilian Amazon. *Agroforestry systems*, 58: 125–135.
- Smith, N.J.H. 1996. *The Enchanted Amazon Rain Forest: stories from a Vanishing World*. Florida, USA, University Press of Florida. 194 pp.
- Snook, L. K. 1996. Catastrophic disturbance, logging and the ecology of mahogany (*Swietenia macrophylla* King): grounds for listing a major tropical timber species in CITES. *Botanical Journal of the Linnean Society*, 22: 35–46.
- Souza, M.C.L., Geraldo, R., Couto, L.B., França, S.d.C. & Pereira, P.S. 2003. Estudo da atividade antiálgica e antiedematogênica no fracionamento do látex de *Parahancornia amapa* Huber Ducke. In: *Congresso Internacional Latino Americano de Etnobotânica*, Rio de Janeiro, Brazil.
- Souza, V.A.B., Vasconcelos, L.F.L., Araújo, E. C.E. & Alves, R.E. 2000. Bacurizeiro. Jaboticabal: FUNEP, 72 pp. (*Série Frutas Nativas*, 11).
- Stepp, J.R. & Moerman, D.E. 2001. The importance of weeds in ethnopharmacology. *Journal of Ethnopharmacology*, 75: 19–23.
- Stevenson, P.R., Quiñones, M. J. & Ahumada, J.A. 2000. Influence of Fruit Availability on Ecological Overlap among Four Neotropical Primates at Tinigua National Park, Colombia. *Biotropica*, 32(3): 533–544

- Sydney Morning Herald. 2006. "Farmer planning diesel tree biofuel". 19 September. www.smh.com.au/news/National/Farmer-planning-diesel-tree-biofuel/2006/09/19/1158431695812.html
- Tocantins, L. 1979. *Formação Histórica do Acre*. Rio de Janeiro, Brazil, Civilização Brasileira.
- USDA-FAS (United States Department of Agriculture Foreign Agricultural Service). 2008. US trade imports HS 10 digit codes. www.fas.usda.gov/ustrade
- van Perlo, B. 2009. *A field guide to the birds of Brazil*. New York, USA, Oxford University Press, 465 pp.
- Varela, V. P., Vieira, M. G. & Melo, Z. L. 1995. Influência do Sombreamento sobre o Crescimento de Mudas de Copaíba (*Copaifera multijuga* Hayne) e Concentração de Clorofila nas Folhas. Belém, Brazil, Museu Paraense Emilio Goeldi. (*Série Botânica*, 11).
- Vasconcelos, S.S. 2001. *Avaliação Ecológica da Exploração de Seringueira* (Hevea brasiliensis Muell. Arg.) por Populações Tradicionais no Estado do Acre. Rio Branco, Brazil, Sefe.
- Vergara, W., Scholz, S., Deeb, A., Toba, N., Zarzar, A. & Valencia, A. 2010. *Assessment of the risk of Amazonian die-back*. Environmentally and Socially Sustainable Development Department, Latin American and Caribbean Region, World Bank, Washington, D.C.
- Veríssimo, A., Barreto, P. Mattos, M. Tarifa, R. & Uhl, C. 1992. Logging impacts and prospects for sustainable forest management in an old Amazonian frontier: the case of Paragominas. *Forest Ecology and Management*, 55: 169–199.
- Veríssimo, A., Barreto, P., Tarifa, R. & Uhl, C. 1995. Extraction of a High-value Natural Resource from Amazon: the case of mahogany. *Forest Ecology and Management*, 72: 39–60.
- Veríssimo, A. & Smeraldi, R. 1999. *Hitting the target: timber consumption in the Brazilian domestic market and promotion of forest certification*. São Paulo, Amigos do Terra – Programa Amazonia, SP, IMAFLORA; Belém, PA; IMAZON.
- Viana, V.N., Mello, R.A., Moraes, L.M. & Mendes, N.T. 1998. Ecologia e Manejo da Castanha-do-pará em Reservas Extrativistas no Xapuri, Acre. In C. Gascon & P. Moutinho (eds.). *Floresta Amazônica: dinâmica, regeneração e manejo*. Manaus, Brazil Ipam/Inpa.
- Vieira, I., Nepstad, D. & Roma, J. C. 1996. O renascimento da floresta no rastro da agricultura. *Ciência Hoje*, 20: 119.
- Vieira, S., Trumbore, S., Camargo, P.B., Selhorst, D., Chambers, J.Q. & Higuchi, N. 2005. Slow growth rates of Amazonian trees: consequences for carbon cycling. *Proc. Nat. Acad. Sci.* 102:18502-18507.
- Villachica, H. 1996. *Frutales y Hortalizas Promisorios de la Amazonia*. Lima, Peru: Tratado de Cooperación Amazónica.
- Wadt, L.H.O., Kainer, K.A & Gomes-Silva, D.A.P. 2005. Population structure and nut yield of a *Bertholletia excelsa* stand in Southwestern Amazonia. *Forest Ecology and Management*, 211(3): 371–384
- Wadt, L.H.O., Kainer, K.A., Staudhammer, C.L. & Serrano, R.O.P. 2008. Sustainable forest use in Brazilian extractive reserves: natural regeneration of Brazil nut in exploited populations. *Biological Conservation*, 141: 332–346.
- Wallace, R. & Ferreira, E. 1998. *Extractive exploitation of cipó titica* (Heteropsis flexuosa (H.B.K.) Bunt., Araceae) in Acre: Management and Market Potential, 17 pp. New York, NY, USA, New York Botanical Garden. www.nybg.org/bsci/acre/www1/cipo.html

- Wallace, R.H., da Silva, M.J.P., de Nascimento, F. L. & Schmink, M. 2008. A feira de produtos florestais do Acre: fortalecendo espaços para integração entre comunidades e mercados, pp. 265-291. In N. Bensusan & G.Armstrong, ed. O Manejo da Paisagem e a Paisagem do Manejo. Instituto Internacional de Educação do Brasil. www.iieb.org.br/arquivos/public_Livro_Manejo_alfa.pdf
- Wawzyniak, J. V. 2001. *Velhinha do lago, mãe do igarapé e outros mitos da Floresta Nacional do Tapajós*. Manaus, Brazil, ProManejo, IBAMA.
- Weinstein, S. 2000. *Causes and Consequences of Açaí Palm Management in the Amazon Estuary, Brazil*. Gainesville, FL, USA, University of Florida. (MA thesis)
- Yungjohann, J.C. 1989. *White Gold: the diary of a Rubber Cutter in the Amazon 1906-1916*. Arizona, USA, Synergetic Press. 103 pp.
- Yuyama, L.K.O., Aguiar, J.P.L., Yuyama, K., Clement, C.R., Macedo, S.H.M., Fávoro, D.I.T., Afonso, C., Vasconcellos, M.B.A., Pimentel, S.A., Badolato, E.S.G. & Vannucchi, H. 2003. Chemical composition of the fruit mesocarp of three peach palm (*Bactris gasipaes*) populations grown in central Amazonia, Brazil. *International Journal of Food Sciences and Nutrition*, 54(1): 49–56. <http://dx.doi.org/10.1080/096374803/000061994>
- Zannini, I.C.C. 1989. *Fragmentos da Cultura Acreana*. São Luís, Brazil, CORSUP/EDUFMA. 388 pp.
- Zona, S. & Henderson, A. 1989. A review of animal-mediated seed dispersal of palms. *Selbyana*, 11: 6–21.
- Zuidema, P.A. & Boot, R.G.A. 2000. Demographic Constraints to Sustainable Palm Heart Extraction from a Sub-canopy Palm in Bolívia. In P.A. Zuidema, ed. *Demography of Exploited tree Species in the Bolivian Amazon*, pp. 53–80. Proefschrift Universiteit Utrecht
- Zuidema, P.A. & Boot, R.G.A. 2002. Demography of the Brazil nut tree (*Bertholletia excelsa*) in the Bolivian Amazon: impact of seed extraction on recruitment and population dynamics. *Journal of Tropical Ecology*, 18: 1–31.

Subject themes¹

Botany and ecology		Legends: respecting nature	268
Amazonian plant diversity	3	Mapinguari: friend of the forest	269
Attention orchidophiles!	163	Music of the forest	273
A whale of a species	102	Nature spirits	270
Differences between the two principal types of cat's claw	69	Pupunha festivals	202
Differences between tucumã of Amazonas and tucumã of Pará	209	Reviving Amazonian culture in schools	22
Future of the forest	235	Small fruit makes a big splash	167
How many fruits per year? - bacuri	41	Songs	275
How many fruits per year? - piquiá	111	Titica and Amazon folklore	138
How palms survive fire	190	Whistling to call the wind and fruit	145
Other bacuris	47	Economics: marketing and trade	
Piquiá forever?	117	Consumers, communities and conservation	106
Regeneration of forest species after swidden agriculture	234	Contract for selling wood	254
Scientists learn from caboclos	161	Downward spiral: prices and açai stands	173
Sweet or bitter amapá	87	Earnings from a typical mahogany tree	104
Variation in the density of titica vine in Amazonia	130	FLORA fashion	125
Which tree species is the most productive?	144	Fruit or farinha?	42
Craftsmanship (handicrafts)		Fruit or wood?	42
Cosmetics, jewellery and a talisman	142	Helpful hints on how to sell your fruit	250
Craftsmanship adds value	133	"He tricked me!" It happens all over the world	248
Crafts of the Apurinã	208	Income from the "fruit of the poor"	150
Fanciful toys of buriti	177	Legislation: challenges for small producers	135
FLORA fashion	125	Mean monthly price and volume of açai	160
Messengers of the forest	274	New clothes from fruit sales	143
Music of the forest	273	1 kg of bark: the value for the collector, the exporter, and the price in the United States of America	67
New uses for dead wood	260	Prices of sofas: Sao Paulo vs. Amazonia	133
Prices of Sofas: Sao Paulo vs. Amazonia	133	Prices of trees sold	244
Which broom lasts longer?	131	Prices vary	73
Culture, traditions and legends		Pupunha Heart of Palm	200
A blessing from above	124	Tips for negotiating the sale of wood	247
Buriti in Apinayé Indian weddings	178	Tree, alqueire or cubic metre?	243
Curupira: guardian of the forest	268		
Forest lantern	74		
Happy açai Sunday	162		
Legend of açai	163		

¹ This list of subject themes was used as the index in the original book directed at a local semi-literate audience. An index of this type proved useful for community groups and educators to locate sections on similar themes throughout the book.

Economics: invisible income and safety nets

Cost of game compared to the price of meat or jerky	187
Forest's gift of game	188
Forest pharmacy: the best health care plan	4
Free from the forest	238
Fruit or wood?	242
Invisible income	43
Invisible income from game	187
Local meat market	117
Money in your pocket and food in your stomach	188
One family, one hectare, ten years	143
Value of game and the equivalent value of farinha	188

Forest reserves and management plans

Community forest reserves	256
João recreates a forest	258
Legislation: challenges for small producers	135
Makings of a management plan	77
Mapping trees: use the rubber roads	78
One family, one hectare, ten years	143
Palm heart extraction	162
Tips for protecting a forest	258
Training future foresters: integrated forest management	19
Tucumã management plan	212

Forest seeds

Climbing high to collect and sell seeds	21
Price of forest seeds relative to the price of wood	93
Seed prices	103
Seeds for sale	93

History

Brazil nut cemetery	60
Cannonball test	105
Cruel fortunes	126
Dairy of a Rubber Tapper: 1906–1916	76
House of Straw	185
Standoff: ranchers vs. rubber tappers	124
Travelling seeds: Asia supplants Amazonian production	126

Hygiene and cosmetics

A luxury product	53
Andiroba soap recipe	36
Beautiful hair	193
Cosmetics, jewellery and a talisman	142
Fresh skin with uxi soap	147
Piquiá soap	113
Sunscreen, deodorant and electricity	179

Legislation and policy

Brazil nut cemetery	60
Certified products	263
Consumers, communities and conservation	106
Legislation: challenges for small producers	135
Makings of a management plan	77
Protected trees: dead on their feet	63
Standoff: ranchers vs. rubber tappers	124
What is certification?	262

Management

A dynamic reserve	257
Agroforestry in the rubber grove	127
Banking on ipê	90
Breaking seed dormancy	59
Challenges for communities	266
Harvest with care	88
How many palm hearts per can?	162
How to collect titica vine	132
How to encourage your plant to sprout	211
João recreates a forest	258
Legislation: challenges for small producers	135
Management of açaí on the island of Marajó	263
Managing secondary forests can yield good fruits	259
Managing the forest to fill the pocket and the belly	264
New extractivism	128
Planting pupunha	203
Removing the bark with care	99
Small fruit makes a big splash	167
Social species	62
Speed your seeds	46
Tips for protecting a forest	258
Tucumã management plan	212
Why plant Brazil nut trees?	99
Wise caboclos	149

Medicinal plants and remedies		
Amapá: Amazonian invigorator	87	
Benefits of plants in secondary forest	260	
Delicious tea	83	
Extraction of ipê-roxo bark	84	
Forest pharmacy	85	
Forest pharmacy: the best health care plan	4	
Hoof protection	75	
In the cities and the countryside	88	
Is cat's claw truly medicinal?	69	
Jatobá is different from jutaí	95	
Medicinal tea – cat's claw	69	
Mosquito repellent and dengue fever	36	
Remedy for a sore throat	74	
Remedy of the saints	33	
Removing the bark with care	99	
Secrets for making tea	94	
Secret to brewing pau d'arco	84	
Selenium: a miracle mineral	53	
Treatment of cuts and worms	163	
Treatments for hepatitis and morning sickness	56	
Uxi oil by Senhorinha	147	
What landscape possesses the most powerful medicinal plants?	86	
NTFPs vs timber (or agriculture)		
Brazil nut cemetery	60	
Capacity building in rural communities	20	
Causes of death	241	
Community decisions and cost-benefit analyses	16	
Community forest reserves	256	
Diversity is security	266	
From compatibility to conflict	239	
Fruit or timber?	145	
Furniture or medicine?	99	
Income from 1 ha over ten years (timber vs. fruit)	143	
Mortality of fruit trees	241	
New uses for dead wood	260	
Price of forest seeds relative to the price of wood	93	
Reserve for the future	237	
Ten years later: communities reflect on their timber sales	252	
Threshold	242	
Timber: fair trade	236	
Where did our medicines go?	86	
Women for sustainability: rethinking timber vs. seed extraction	37	
Nutrition and health		
Açaí - Its good and good for you	164	
Buriti for healthy eyes and body	179	
Fresh açaí on every corner	172	
Health and nutrition: compliments of the forest	4	
Healthy farinha and purified water	52	
Meat of the plant kingdom	54	
Patauí oil compared with milk and beef	194	
Selenium: a miracle mineral	53	
Tucumã sandwiches: the rage in Manaus	209	
Processing		
Backwoods processing: the key to andiroba's curative power?	33	
Buriti pulp	180	
Extracting the oil – copaiba	75	
How to extract latex	124	
How to make oil - patauí	195	
Jatobá advances rubber technology	95	
Oil extraction - inajá	186	
Oil: How do you extract it? - buriti	180	
Piquiá oil	113	
Preparing the vine for market	68	
Tips for oil extraction	76	
Tools of the trade	75	
Traditional techniques for extracting oil – andiroba	34	
Uxi oil by Senhorinha	147	
Variation in oil yields – andiroba	35	
Recipes		
Bacuri rind marmalade	44	
Brazil nut cookies by the famous Brazilian cook Maria Cosson	54	
Buriti sweets	181	
Buriti frozen crème	181	
Buriti sago	180	
Buriti sugar	180	
Chicken in Brazil nut milk	55	
Cupuaçu and Brazil nut bonbons	56	
Fabiana's cake - Patauí	195	
Fried pupunha	201	
Frozen crème of bacuri rind	44	

Inajá fruit drink	186	Oil: various colours, scents and textures	73
Jatobá bread	96	Scientists learn from caboclos	161
Jatobá flour	96	Small fruit makes a big splash	167
Jatobá porridge	96	The Forest Pharmacy	85
Juice of bacuri peel	44	Titica and Amazon Folklore	138
Marajó cake	55	Titica: a tool for hunters	134
Patauí - Making juice – the slingshot test	194	Tucumã inventory: indigenous knowledge complements scientific	207
Pupunha cake	201	Wise caboclos	149
Pupunha purée	201	Whistling to call the wind and fruits	145
Uxi candy	147		
Uxi cream	146		
Research methods		Wildlife	
Caboclos learn the language of loggers	245	Agouti, monkey and frog	57
How many fruit? A method to estimate production	31	Blue and yellow macaws (<i>Ara ararauna</i>)	181
Mapping	79	Connections between wildlife, people and fruit	119
Mapping trees: use the rubber roads	78	Food fest for wildlife	115
Rural women manage titica	136	Fork-tailed palm swifts (<i>Tachornis squamata</i>)	181
Tucumã inventory: indigenous knowledge complements scientific	207	Golden-winged parakeets (<i>Brotogeris chrysopterus tuipara</i>)	45
Volume of wood in management plans	246	Invisible income from game	187
		Money in your pocket and food in your stomach	188
Songs		Piquiá forever?	117
Anthem of the rubber tappers	260	Red-bellied macaw (<i>Orthopsittaca manilata</i>)	181
Ecological brega	276	Sharing the pie with wildlife	148
Ecological logic	275	Titica: a tool for hunters	134
Ecological xote	278	Uxi dispersers	151
Hunting	282	White-bellied parrots (<i>Pionites l. Leucogaster</i>)	45
The farmer sold his land	277	White-bellied spider monkey (<i>Ateles belzebuth</i>)	195
The great hinterland: paths	283	Wildlife habitat: primary and secondary forests	97
The vulture's carimbó	281		
The way we are	282		
Unafraid to be a woman	279		
Traditional knowledge		Women and forests	
Brazil nuts: managed by Indians?	62	Babassu breakers	272
Backwoods processing: the key to andiroba's curative power	33	Contrasting collection styles: women and men	137
Cosmetics, jewellery and a talisman	142	Guardians of the forest: midwives' perspective from Alto Juruá	271
Forest lantern	74	Rural women manage titica	136
House of straw	185	Women earn respect and income	136
Integrating scientific and traditional knowledge	12	Women for sustainability: rethinking timber vs. seed extraction	37
Lost knowledge	33	Women's participation	271
Mapping trees: use the rubber roads	78		

APPENDIX A

Trees and palms with a complete chapter

Comon name(s)	Scientific name	Family	Page
Açaí	<i>Euterpe oleracea</i> Mart.	Arecaceae	157
Açaí (solitary)	<i>Euterpe precatoria</i> Mart.	Arecaceae	169
Andiroba	<i>Carapa guianensis</i> Auble.	Meliaceae	29
Bacuri	<i>Platonia insignis</i> Mart.	Clusiaceae	39
Brazil nut	<i>Bertholletia excelsa</i> Bonpl.	Lecythidaceae	49
Buriti, moriche palm	<i>Mauritia flexuosa</i> L.f.	Arecaceae	175
Cat's claw, unha-de-gato	<i>Uncaria tomentosa</i> (Willd. ex Roem. & Schult.) D.C. and <i>Uncaria guianensis</i> (Aubl.) J.F. Gmel.	Rubiaceae	65
Copaíba	<i>Copaifera</i> spp.	Leguminosae (Caesalpinaceae)	71
Inajá	<i>Attalea maripa</i> (Aubl.) Mart. [syn.: <i>Maximiliana maripa</i> (Aublet) Drude]	Arecaceae	183
Ipê-roxo, pau d'arco	<i>Tabebuia impetiginosa</i> (Mart. ex. DC) Standl.	Bignoniaceae	81
Jatobá	<i>Hymenaea courbaril</i> L.	Leguminosae (Caesalpinaceae)	91
Mahogany, mogno	<i>Swietenia macrophylla</i> King	Meliaceae	101
Patauí	<i>Oenocarpus bataua</i> Mart.	Arecaceae	191
Piquiá	<i>Caryocar villosum</i> (Aubl.) Pers.	Caryocaraceae	109
Pupunha, peach palm	<i>Bactris gasipaes</i> Kunth	Arecaceae	197
Rubber tree, seringueira	<i>Hevea brasiliensis</i> (Willd. ex A. Juss.) Müll. Arg.	Euphorbiaceae	121
Títica	<i>Heteropsis</i> spp.	Araceae	129
Tucumã of Amazonas	<i>Astrocaryum aculeatum</i> G. Mey. (syn.: <i>A. tucuma</i> Mart.)	Arecaceae	205
Uxi, uchi	<i>Endopleura uchi</i> (Huber) Cuatrec.	Humiriaceae	139

APPENDIX B

Other trees and palms mentioned in this book

Common name	Scientific name	Family	Page
Abiu, abiorana	<i>Pouteria</i> spp.	Sapotaceae	3, 215, 217
Amapá amargo (bitter Amapá)	<i>Parahancornia fasciculata</i> (Poir.) Benoist [syn.: <i>P. amapa</i> (Huber) Ducke]	Apocynaceae	87, 88
Amapá preto (black Amapá)	<i>Couma guianensis</i> Aubl.	Apocynaceae	87, 88
Amapá doce (sweet Amapá)	<i>Brosimum</i> spp.	Moraceae	87, 88
Ameixa, jacaicá	<i>Antrocaryon amazonicum</i> (Ducke) B.L. Burt & A.W. Hill	Anacardiaceae	218, 258
Amor crescido	<i>Portulaca pilosa</i> L.	Portulacaceae	86
Apuruí	<i>Borojoa [Alibertia]</i> spp.	Rubiaceae	215, 219
Araçá	<i>Eugenia feijoi</i> O. Berg	Myrtaceae	215, 216, 218
Araçá-boi	<i>Eugenia stipitata</i> McVaugh	Myrtaceae	218
Ata	<i>Annona</i> spp.	Annonaceae	220
Ata brava	<i>Rollinia calcarata</i> R.E. Fries and <i>Rollinia mammifera</i> Maas & Westra	Annonaceae	215, 220
Azeitona brava, Azeitona da mata	<i>Eugenia egensis</i> DC.	Myrtaceae	218
Babaçu, babassu	<i>Attalea speciosa</i> Mart. ex Spreng.	Arecaceae	107, 142, 183, 186, 190, 272
Bacaba	<i>Oenocarpus bacaba</i> Mart.	Arecaceae	142, 194, 258
Bacuri da várzea	<i>Tovomita</i> spp.	Clusiaceae	216
Bacuripari	<i>Garcinia [Rheedia] brasiliensis</i> Mart.	Clusiaceae	47, 216, 259
Barbatimão	<i>Stryphnodendron barbatimam</i> Mart.	Leguminosae (Mimosaceae)	86
Biribá, biribá brava	<i>Rollinia</i> spp.	Annonaceae	150, 220
Breu	<i>Protium</i> spp.	Burseraceae	33, 147, 221, 273
Cacao, cacau,	<i>Theobroma cacao</i> L.	Sterculiaceae (Malvaceae)	36, 164, 222, 223







Common name	Scientific name	Family	Page
Cacau jacaré	<i>Herrania [Theobroma] mariae</i> (Mart.) Decne. ex Goudot, <i>H. nitida</i> (Poepp.) R.E. Schultes	Sterculiaceae (Malvaceae)	222
Cacau de macaco, Cacaurana, cacau do Peru	<i>Theobroma obovatum</i> Klotzch	Sterculiaceae (Malvaceae)	222, 223
Cacaurana	<i>Theobroma microcarpum</i> Mart.	Sterculiaceae	222, 223
Cacauí	<i>Theobroma speciosum</i> Willd.	Sterculiaceae (Malvaceae)	222, 223
Cajá	<i>Spondias mombin</i> L.	Anacardiaceae	216, 224
Cajá-açu	<i>Spondias "mombin x testudinis"</i>	Anacardiaceae	224
Cajá de jaboti	<i>Spondias testudinis</i> J.D. Mitch. & Daly	Anacardiaceae	216, 224
Cajarana	<i>Spondias testudinis</i> J.D. Mitch. & Daly and <i>Spondias dulcis</i> Parkinson	Anacardiaceae	216, 224
Camu-camu	<i>Myrciaria dubia</i> (Kunth) McVaugh	Myrtaceae	216
Castanha de porco, castanhola, castanhinha	<i>Caryodendron amazonicum</i> Ducke	Euphorbiaceae	225
Cedro	<i>Cedrela odorata</i> L.	Meliaceae	69, 142, 258, 273
Cerejeira	<i>Amburana acreana</i> (Ducke) A.C. Sm.	Leguminosae (Fabaceae)	93
Chacrona	<i>Psychotria viridis</i> Ruiz & Pav.	Rubiaceae	270
Cocão	<i>Attalea tessmannii</i> Burret	Arecaceae	225
Coconut	<i>Cocos nucifera</i> L.	Arecaceae	142
Cumarú	<i>Dipteryx odorata</i> (Aublet) Willd.	Leguminosae (Fabaceae)	5, 85, 93, 259
Cupuaçu	<i>Theobroma grandiflorum</i> (Willd. ex Spreng.) K. Schum.	Sterculiaceae (Malvaceae)	44, 56, 61, 150, 164, 222
Dendê, African oil palm	<i>Elaeis guineensis</i> Jacq.	Arecaceae	xxi, 142
Ebony, Brazilian ebony	<i>Diospyros</i> spp.	Ebenaceae	273
Envira caju	<i>Onychopetalum krukovii</i> R.E. Fries	Annonaceae	216, 226
Escada-de-jaboti	<i>Bauhinia guianensis</i> Aubl.	Leguminosae (Caesalpiniaceae)	69
Freijó	<i>Cordia goeldiana</i> Huber	Boraginaceae	272
Gameleira	<i>Ficus dendrocida</i> Kunth and other <i>Ficus</i> spp.	Moraceae	123
Graviola, soursop	<i>Annona muricata</i> L.	Annonaceae	258





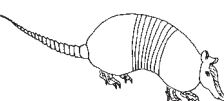

Common name	Scientific name	Family	Page
Guaraná	<i>Paullinia cupana</i> Kunth	Sapindaceae	86, 165, 171
Imbaúba	<i>Cecropia</i> spp.	Moraceae (Cecropiaceae)	274
Ingá	<i>Inga</i> spp.	Leguminosae (Mimosaceae)	3, 116, 216, 226, 227, 259
Ipê amarelo	<i>Tabebuia serratifolia</i> (Vahl) G. Nicholson	Bignoniaceae	93
Jacarandá da Bahia, Brazilian rosewood	<i>Dalbergia nigra</i> (Vell.) Allemão ex Benth.	Leguminosae (Fabaceae)	273
Jaci	<i>Attalea butyracea</i> (Mutis ex L.f.) Wess. Boer	Arecaceae	181, 190
Daime, jagube vine	<i>Banisteriopsis caapi</i> (Spruce ex Griseb.) C.V. Morton	Malpighiaceae	270
Jarana	<i>Lecythis lurida</i> (Miers) S.A. Mori	Lecythidaceae	94, 259
Jupati	<i>Raphia taedigera</i> (Mart.) Mart.	Arecaceae	142, 143
Jutaí	<i>Hymenaea parvifolia</i> Huber	Leguminosae (Caesalpinaceae)	95
Jutaí-da-folha-grande (long-leaved jutaí)	<i>Hymenaea oblongifolia</i> Huber	Leguminosae (Caesalpinaceae)	95
Louro preto	<i>Ocotea fragrantissima</i> Ducke	Lauraceae	273
Maçaranduba, massaranduba	<i>Manilkara huberi</i> (Ducke) Chevalier	Sapotaceae	33, 93, 94, 244, 258
Marapuama	<i>Ptychopetalum olacoides</i> Benth.	Olacaceae	86
Marupá	<i>Simarouba amara</i> Aubl.	Simaroubaceae	273
Mastruz, wormseed	<i>Chenopodium ambrosioides</i> L.	Chenopodiaceae	86
Morototó	<i>Schefflera morototoni</i> (Aubl.) Maguire, Steyerf. & Frodin	Araliaceae	273
Mucajá	<i>Acrocomia aculeata</i> (Jacq.) Lodd. ex Mart.	Arecaceae	142
Mumbaca	<i>Astrocaryum gynacanthum</i> Mart.	Arecaceae	142
Mururé	<i>Brosimum acutifolium</i> Huber	Moraceae	258, 282
Murumuru	<i>Astrocaryum murumuru</i> Wallace	Arecaceae	142, 213, 216, 257, 274
Pariri	<i>Pouteria pariry</i> (Ducke) Baehni	Sapotaceae	217
Pau-rainha	<i>Brosimum rubescens</i> Taub.	Moraceae	273






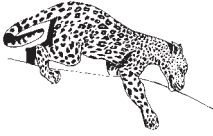
Common name	Scientific name	Family	Page
Piaçava, piassava	<i>Attalea funifera</i> Mart. ex Spreng.	Arecaceae	257
Preciosa	<i>Aniba canelilla</i> (Kunth) Mez	Lauraceae	273
Puruí, puruí grande, apuruí	<i>Borojoa</i> or <i>Alibertia</i> spp.	Rubiaceae	219
Quebra-pedra	<i>Phyllanthus niruri</i> L.	Euphorbiaceae (Phyllanthaceae)	86
Sacaca	<i>Croton cajucara</i> Benth.	Euphorbiaceae	86
Sangre de grado	<i>Croton lechleri</i> Müll. Arg.	Euphorbiaceae	69
Sapota, sapota do Solimões	<i>Matisia</i> [<i>Quararibea</i>] <i>cordata</i> Humb. & Bonpl.	Bombacaceae (Malvaceae)	228
Sapota macho	<i>Matisia bicolor</i> Ducke	Bombacaceae (Malvaceae)	228
Sapucaia	<i>Lecythis</i> spp.	Lecythidaceae	259, 271, 274
Sucupira	<i>Bowdichia virgilioides</i> Kunth	Leguminosae (Fabaceae)	258
Sucuúba	<i>Himatanthus sucuuba</i> (Spruce) Woods.	Apocynaceae	85, 86, 259
Tatajuba	<i>Bagassa guianensis</i> Aubl. (for SW Amazon <i>Maclura tinctoria</i> (L.) D. Don ex Steud.)	Moraceae	21, 115
Tento	<i>Ormosia</i> spp.	Leguminosae (Fabaceae)	142
Tucumã do Pará	<i>Astrocaryum vulgare</i> Mart.	Arecaceae	209
Tucumã-í	<i>Astrocaryum acaule</i> Mart.	Arecaceae	209, 212
Ucuúba	<i>Virola michelii</i> Heckel	Myristicaceae	85, 166
Umarí	<i>Poraqueiba</i> spp.	Icacinaceae	216
Uricuri, aricuri	<i>Attalea</i> [<i>Orbignya</i>] <i>phalerata</i> Mart. ex Spreng.	Arecaceae	183, 190
Urucu, annatto	<i>Bixa orellana</i> L.	Bixaceae	29, 32
Uxirana	<i>Sacoglottis</i> spp.	Humiriaceae	142, 274
Pupunha brava (“wild pupunha”)	<i>Aiphanes aculeata</i> Willd.	Arecaceae	204
Veronica	<i>Dalbergia subcymosa</i> Ducke and <i>Dalbergia monetaria</i> L.f.	Leguminosae (Fabaceae)	69, 86


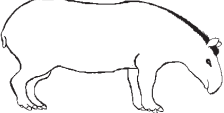


APPENDIX C

Wild animals mentioned in this book




Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
MAMMALS					
<i>Agouti paca</i> 	paca	paca	fruit, flowers, nuts, seeds, tubers	primary and secondary forest, gardens and plantations	36, 57, 76, 94, 97, 112, 115, 116, 119, 141, 142, 148, 181, 186, 189, 210, 212, 227, 259, 275
<i>Alouatta</i> spp. 	howler monkey	guariba	leaves, fruit, and seeds	primary forest, várzea	189
<i>Artibeus lituratus</i> 	great fruit-eating bat	morcego de cara listrada	fruit, some insects, pollen and leaves	forests, plantations and gardens	151
<i>Ateles belzebuth</i> 	white-bellied spider monkey, long-haired spider monkey	macaco aranha, coatá	fruit, rarely leaves, flowers, honey or insects	primary forest	165, 195
<i>Bradypus tridactylus</i> 	pale-throated three-toed sloth	preguiça bento	leaves	primary and secondary forest	97
<i>Bradypus variegatus</i> 	brown-throated three-toed sloth	preguiça branca	leaves	primary and secondary forest	116





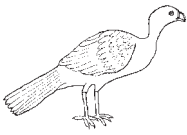


Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Cebus apella</i> 	brown capuchin, black-capped capuchin, tufted capuchin	macaco prego	fruit, palm nuts, insects, small vertebrates, nectar	primary and secondary forest	57, 165
<i>Choloepus didactylus</i> 	southern two-toed sloth	preguiça real	leaves, fruit	primary and secondary forest	97
<i>Coendou prehensilis</i> 	Brazilian porcupine	quandu, coendu, porco espinho	fruit, seeds, leaves, bark	primary and secondary forest, gardens and plantations	195, 281
<i>Dasyprocta</i> spp. 	agouti	cutia	fruit, nuts, seeds, flowers, roots	primary and secondary forest, gardens and plantations, dry forest, cerrado	36, 57, 59, 76, 97, 108, 112, 115, 116, 117, 119, 141, 142, 148, 149, 165, 186, 189, 202, 206, 210, 212, 259, 275
<i>Dasypus novemcinctus</i> 	nine-banded armadillo, nine-banded long-nosed armadillo	tatu, tatu branco, tatu galinha	ants, termites, other insects	primary and secondary forest	57, 112, 115, 117, 141, 148, 186, 189, 210, 259
<i>Dasypus septemcinctus</i> 	seven-banded armadillo, seven-banded long-nosed armadillo	tatu pretinho, tatuí	insects, fruit	primary forest, cerrado	57, 112, 115, 117, 141, 148, 186, 189, 210, 259


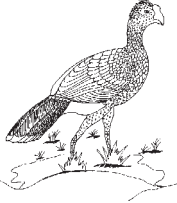
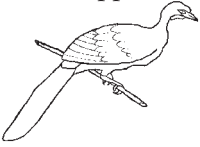
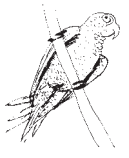

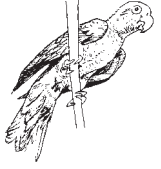

Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Leopardus pardalis, Felis pardalis</i> 	ocelot	gato do mato, jaguaritica	rodents, some birds, snakes, lizards and other small vertebrates	primary, secondary and mangrove forests, pastures, savannah, cerrado	97
<i>Lonchophylla thomasi</i> 	Thomas's nectar bat, Thomas's long-tongued bat		nectar, pollen, some insects, fruit	primary and secondary forest	117
<i>Mazama americana</i> 	red brocket deer	veado vermelho, veado mateiro, veado capoeira, veado pardo	fruit, fungi, leaves	primary and secondary forest, plantations, forest edge	57, 76, 97, 112, 115, 116, 117, 119, 141, 142, 148, 165, 172, 178, 181, 186, 195, 202, 210
<i>Mazama gouazoubira</i> 	grey brocket deer	veado branco	fruit, flowers, leaves	forests, cerrado, open areas	57, 76, 97, 112, 117, 119, 141, 142, 148, 165, 172, 178, 181, 186, 195, 202, 210
<i>Nasua nasua</i> 	coati, coatimundi, South American coati	quati, quatumundé	fruit, invertebrates, small animals	primary forest, cerrado	112, 148, 281
<i>Panthera onca</i> 	jaguar	onça pintada, onça preta	large mammals, also turtles, tortoises, caimans, birds, fish, smaller mammals	primary, secondary, and flooded forest, grassland, scrub forest often near water	267, 270, 275

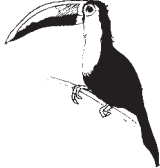





Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Sciurus spp.</i> 	squirrel	quatipuru, esquilo	fruit, seeds, bark, nuts	primary and secondary forest, gardens and plantations	36, 57, 76, 141, 142, 148, 186
<i>Tapirus terrestris</i> 	Brazilian tapir, lowland tapir	anta	fruit, leaves, roots, other vegetation	primary closed forest	76, 94, 97, 119, 142, 148, 178, 181, 186, 189, 195
<i>Tayassu pecari</i> 	white-lipped peccary	queixada, porcão	fruits, roots, tubers, palm nuts, invertebrates	primary forest, cerrado	76, 97, 119, 142, 148, 165, 178, 181, 195, 210
<i>Tayassu tajacu</i> 	collared peccary	catitu	fruits, palm nuts, roots, tubers, invertebrates, small vertebrates	forest, secondary forest, cerrado, desert	76, 116, 119, 142, 148, 165, 178, 181, 210

BIRDS

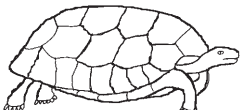
<i>Amazona farinosa</i> 	mealy parrot	papagaio moleiro	fruit, seeds, nuts, flowers, leaf buds	primary and secondary forests, plantations	116
<i>Amazona spp.</i> 	parrot, Amazon parrot	papagaio	fruit, seeds, nuts, flowers, leaf buds	primary and secondary forests, plantations, várzea	119, 172, 195, 210
<i>Ara ararauna</i> 	blue and yellow macaw, blue and gold macaw	arara canindé	fruit, seeds	primary and secondary forest, várzea, cerrado	142, 181

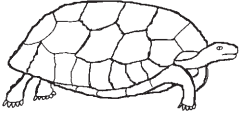



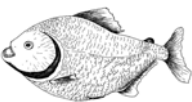
Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Ara</i> spp. 	macaw	arara	fruit, seeds	primary and secondary forest, várzea	142, 148, 119, 172, 189, 195, 210, 275
<i>Aratinga leucophthalma</i> 	white-eyed parakeet, white-eyed conure	periquitão maracanã	flowers, seeds, fruit, nuts, insects	primary and secondary forests, várzea, cerrado, plantations	45
<i>Brotogeris chrysoptera</i> 	golden-winged parakeet	periquito de asa vermelha, periquito de asa dourada	nectar, fruit, seeds	primary and secondary forest, savannah, parks	45, 46
<i>Cacicus cela</i> 	yellow-rumped cacique	xexéu	insects, fruit, nectar	várzea, plantation, secondary forest	45
<i>Crax</i> spp. 	curassow	mutum, mutum branco, mutum de penacho	fruit, seeds	primary forest	97, 172, 195, 210
<i>Cyanerpes caeruleus</i> 	purple honeycreeper	Saí de perna amarela, saí púrpura	nectar, insects, fruit	primary and secondary forest, várzea	45
<i>Geotrygon</i> spp. 	quaildove	jurití, pariri	fruit, seeds	primary and secondary forest, plantations	259

Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Harpia harpyja</i> 	harpy eagle	gavião real	medium-sized mammals, some large birds	primary forest, tall secondary forest	97
<i>Mitu tuberosum</i> 	razor-billed curassow	mutum preto, mutum cavalo	fruit, seeds	primary forest	97
<i>Ortalis</i> spp. 	chachalaca	aracuã	fruit, flowers, seeds	secondary and primary forest	165, 181, 275
<i>Orthopsittaca manilata</i> 	red-bellied macaw	maracanã do buriti	palm fruit and other fruit	várzea, igapó. secondary forests with buriti	181
<i>Penelope</i> spp. 	guan	jacu, japassaro	fruit, seeds	primary forest	181, 195
<i>Pionites leucogaster</i> 	white-bellied parrot	marianinha de cabeça amarela	seed, fruit	primary forest	45
<i>Pteroglossus</i> spp. 	aracari	araçari	fruit, some insects and small vertebrates	primary and secondary forest, plantations	195

Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Ramphastos tucanus</i> 	white-throated toucan, Cuvier's toucan	tucano grande de papo branco	fruit, some invertebrates, bird eggs, and small vertebrates	primary and secondary forest	165, 172, 195
<i>Ramphocelus carbo</i> 	silver-beaked tanager	pipira, pipira de máscara	fruit, insects, nectar	várzea, primary and secondary forests, gardens, plantations	45
<i>Tachornis squamata</i> 	fork-tailed palm swift	tesorinha, andorinhão do buriti	insects	várzea, open areas	181
<i>Thraupis episcopus</i> 	blue-grey tanager	sanhaçu da amazônia	fruit, insects, nectar	gardens, plantations, secondary and primary forests	45
<i>Thraupis palmarum</i> 	palm tanager	sanhaçu do coqueiro, saí açu pardo	fruit, nectar, insects	gardens, plantations, secondary and primary forests	45
<i>Tinamus</i> spp. <i>Crypturellus</i> spp. 	tinamous	nambu, inhambu	fruit, seeds	primary and tall secondary forest	165, 259

REPTILES

<i>Geochelone carbonaria</i> 	red-footed tortoise	jabuti, jabuti-do-pé-vermelho, jabuti carumbé	fruits, vegetation	primary and secondary forest, savannah	76, 181
---	---------------------	---	--------------------	--	---------

Scientific name	English common name	Portuguese common name	Diet	Habitat	Page
<i>Geochelone denticulata</i> 	South American yellow-footed tortoise, Brazilian giant tortoise, forest tortoise	jabuti branco, jabuti-do-pé-amarelo, jabuti-carumbé	fruits, flowers, vegetation	primary and secondary forest, savannah	76, 115, 181
AMPHIBIANS					
<i>Dendrobates castaneoticus</i> , <i>Adelphobates castaneoticus</i> 	Brazil-nut poison frog		ant, termites and other small insects	primary forest	57
<i>Dendrobates quinquevittatus</i> , <i>Adelphobates quinquevittatus</i> 	Amazonian poison frog		insects	primary forest	57
FISHES					
<i>Colossoma macropomum</i> 	black-finned pacu	tambaqui	fruit, seeds, grain, zooplanton, insects, snails	fresh (black) water, flooded forest of Amazon, Orinoco river basins	125
<i>Serrasalmus niger</i> , <i>Serrasalmus rhombeus</i> 	black piranha, red-eyed piranha	piranha negra	fish, fins, seeds	fresh water of Amazon, Orinoco river basins	125

Index

Pagination in **bold** refers to main entries for plants and trees.

A

- Abaetetuba, Pará State, Brazil 2(map), 162, 177
Muritifest 177
- abbreviations for measurements xxiii
- abeiriro 287
- abiorana (abiu; maparajuba; *Pouteria* spp.) 3, 215, 217, 305
- abiorana latex 217
- abiu (abiorana; maparajuba; *Pouteria* spp.) 3, 215, 217, 305
- abrico 287
- açaí
multi-stemmed (*Euterpe oleracea*) 4, 9, 44, 157-68, 216, 263, 286, 288, 290, 294, 303
solitary (*Euterpe precatoria*) viii, **169-74**, 263, 287, 294, 303
varietal differences 161
- Açaí Fair, Belém 41, 159
- açaí harvesting
management 263, 298
- açaí oil 171
- Acará, Pará State, Brazil 2(map), 141, 149, 150, 159
- açoita cavalo (*Lueheopsis duckeana*) 259
- Acre, Federal University of (UFAC), Brazil xiv, xv, xvi, xviii
- Acre State, Brazil viii, 2(map), 3, 21, 30, 31, 49, 50, 57, 58, 63, 66, 75, 77, 78, 81, 82, 84, 92, 93, 99, 102, 121, 123, 124, 127, 132, 169, 176, 178, 184, 185, 191, 195, 204, 205, 208, 209, 215, 216, 218, 219, 220, 224, 225, 228, 268, 288, 289, 290, 294
Alto Juruá 271-2
Alto Juruá Extractive Reserve 257
Brasília 2(map), 103
Chico Mendes Extractive Reserve 50, 192, 193
Cruzeiro do Sul 2(map), 213
Epitaciolândia 2(map), 170
FLORA Forest Products Market 125, 133
Freijó 272
Laranjal do Jari 53
Marechal Thaumaturgo 272
Rio Branco 2(map), 51, 74, 92, 93, 131, 133, 171, 172, 173, 193, 208
São Luiz do Remanso 172, 287
Sena Madureira 272
Senador Guimard 173
Tarauacá 2(map), 72, 226
Xapuri 2(map), 123, 285, 292, 297
- Acrocomia aculeata* (mucajá) 142, 307
- ACT *see* Anthropological Center for Training and Research on Global Environmental Change
- adding value to forest products 133, 137, 168, 251, 261
- Adelphobates*
A. castaneoticus see Dendrobates castaneoticus
A. quinquevittatus see Dendrobates quinquevittatus
- aflatoxins 51
- African oil palm (dendê; *Elaeis guineensis*) xxii, 142, 306
- age of trees
Brazil nut 58, 60
see also production, average time to
- agouti (cutia; *Dasyprocta* spp.) 36, 57, 59, 76, 97, 108, 112, 115, 116, 117, 119, 141, 148, 165, 186, 189, 202, 206, 210, 211, 212, 259, 275, 310
- Agouti paca* (paca) 36, 76, 94, 97, 112, 115, 116, 117, 119, 141, 142, 148, 181, 186, 189, 210, 212, 221, 259, 275, 309
- agricultural intensification 286
- agroforestry 58, 118, 127, 128, 122, 123, 127, 165, 167, 203, 226, 295
- agroforestry management 15
açaí 165-6
açaí (solitary) 173
andiroba 37
bacuri 45-6
Brazil nut 58-9, 290
buriti 182
cat's claw 70
copaíba 77
inajá 189
ipê-roxo 89-90
jatobá 98
mahogany 107
patauá 196
piquiá 118
pupunha 203
rubber tree 127
titica 134-5
tucumã of Amazonas 211, 212
uxi 149
see also management plans

- Aiphanes aculeata* (chica-chica; pupunha brava; wild pupunha) 204, 308
- air
- pollution 278
 - quality 4, 276
 - temperature 259
- ajuaje (buriti; moriche palm; *Mauritia* spp.) 4, 175-82, 216, 283, 287, 290, 293, 295, 303
- Ajuru, Limoeiro de 276
- Alechandre, Andréa xiv, xviii, 71, 78, 79
- Alencar, Dr. 72
- Alibertia* (apurui; puruí; puruí grande) 215, 219, 305, 308
- A. claviflora* 219
 - A. sorbilis* 219
- Almeida, M. xvii, 257
- Alouatta* spp. (guariba; howler monkey) 189, 309
- alqueires xxi, 13, 243
- Alto Juruá, Acre State, Brazil 271-2
- Alto Juruá Extractive Reserve, Acre State, Brazil 257
- Alto Purús, Peru 213
- Alto Rio Guama, Pará State, Brazil 31, 294
- amapá 2, 5
- species differences 87
- amapá amargo (bitter amapá; *Parahancornia fasciculata*) 85, 87, 88, 260, 295, 296, 305
- amapá doce (sweet amapá; *Brosimum parinarioides*) 87, 88, 289, 305
- amapá latex 85, 87, 88, 260, 296
- amapá preto (black amapá; *Couma guianensis*) 87, 88, 305
- Amapá State, Brazil 2(map), 21, 32, 50, 53, 131, 132, 134, 135-6, 138, 158, 159, 293
- Macapá 2(map), 133, 142, 160
- Amapá State Research Institute *see* Instituto de Pesquisas Científicas e Tecnológicas do Estado do Amapá
- amaparana (*Thyrsodium paraense*) 259
- Amaral, Paulo xvii, xviii, 264
- Amaral Neto, Manuel xvii, 264
- Amazon Initiative xvii
- Amazon Institute of People and the Environment *see* Instituto do Homem e Meio Ambiente da Amazônia
- Amazon river xxiv(map), 126, 158, 165, 167
- Amazon Theatre, Manaus, Amazonas State, Brazil 126
- Amazona* 119, 141, 172, 181, 195, 202, 210, 286
- A. farinosa* (mealy parrot; papagaio moleiro) 116, 312
- Amazonas State, Brazil 2(map), 21, 123, 136, 158, 173, 191, 202, 205, 209
- Jaú National Park 130, 288
 - Manaus xxiv(map), 2(map), 19, 30, 72, 73, 121, 126, 199, 206, 207, 208, 209-10, 226, 273
 - Middle Juruá 18
 - Pauini 272
 - Pindorama Ranch 212
 - Trombetas 2(map), 50, 62
- Amazonia xxi, xxiv(map), 2(map)
- Central 47, 92, 198
 - human population 1
 - plant diversity 3
- Amazonia, Federal Rural University of (UFRA), Brazil xvi
- Amazonian poison frog (*Dendrobates [Adelphobates] quinquevittatus*) 57, 286, 316
- Amazonlink.org xviii
- Amburana acreana* (cerejeira) 93, 306
- ameixa (ameixeira; jacaicá; *Antrocaryon amazonicum*) 218, 258, 305
- ameixeira (ameixa; jacaicá; *Antrocaryon amazonicum*) 218, 258, 305
- amor-crescido (*Portulaca pilosa*) 86, 305
- amulets 139, 142
- anani (*Symphonia globulifera*) 259
- Ananim, Pará State, Brazil 234
- ancestors, consultation of 270
- Andes 203, 204, 227, 228
- andiroba (*Carapa guianensis*) 11, 21, 29-38, 85, 166, 271, 291, 294, 303
- andiroba oil
- extraction 33-5, 294
 - uses 23, 29, 32, 237
 - yields 35
- andorinhão do buriti (fork-tailed palm swift; tesorinha; *Tachornis squamata*) 181, 315
- Aniba canelilla* (preciosa) 273, 308
- A. rosaeodora* (pau-rosa) 117
- animal feeds 40, 161, 185, 186, 199, 209, 272
- animal housing 259
- animal treatments *see* veterinary uses of forest products
- annatto (urucu; *Bixa orellana*) 29, 32, 308
- Annona* (ata) 220, 305
- A. muricata* (graviola; soursop) 258, 306
- anta (Brazilian tapir; lowland tapir; *Tapirus terrestris*) 142, 148, 178, 181, 195, 312
- anteaters 261, 281
- anthelmintics *see* medicinal uses of forest products: worms
- Anthropological Center for Training and Research on Global Environmental Change (ACT) xiv
- antibiotic of the forest *see* copaiba
- antibiotics 85
- Antioquia, University of, Colombia (UdeA) xvii, xx

- antioxidants 4, 53, 157, 164
 Antoninho (from Capim Community) xvii
 Antonio (from Capim Community) xvii
Antrocaryon amazonicum (ameixa; ameixeira; jacaicá) 218, 258, 305
 ants 59, 94, 138, 149
 aphrodisiacs 199
 apical meristem xxi, 190
 Apinayé Indians 178, 179, 285
 Apurinã Indians 208, 209, 287
 apurú (*Alibertia* spp.) 215, 219, 305, 308
Ara 119, 141, 142, 148, 172, 189, 195, 210, 275
 A. ararauna (arara canindé; blue and gold macaw; blue and yellow macaw) 181, 312
 araçá (*Eugenia feijoi*) 216, 218, 305
 araçá-boi (*Eugenia stipitata*) 218, 305
 aracari (araçari; *Pteroglossus* spp.) 195, 314
 araçás (*Eugenia* spp.) 215, 216, 218
 aracuã (chachalaca; *Ortalis* spp.) 165, 181, 275, 314
 arara canindé (blue and gold macaw; blue and yellow macaw; *Ara ararauna*) 181, 312
Aratinga leucophthalma (periquitão maracanã; white-eyed conure; white-eyed parakeet) 45, 313
 Argentina xxiv(map), 227
 Argolo, Valdirene xiv, xviii, 49
 aricuri (uricuri; *Attalea phalerata*) 183, 190, 308
 Ariquemes Reserve, Rondonia State, Brazil 21
 armadillos 57, 112, 117, 141, 148, 186, 189, 210, 259
 seven-banded [long-nosed] 115, 310
 nine-banded [long-nosed] 115, 116, 310
Artibeus lituratus (great fruit-eating bat; morcego de cara listrada) 151, 309
 Articulated Movement of Women from the Amazon *see* Movimento Articulado de Mulheres da Amazonia
 Asia, rubber plantations in 126
Astrocaryum
 A. acaule (tucumã-í) 209, 212, 308
 A. aculeatum (also known as *A. tucuma*; jabarana; tucumã of Amazonas) 142, 190, 205-13, 287, 288, 290, 295, 303
 A. gynacanthum (mumbaca) 307
 A. murumuru (murumuru) 142, 213, 216, 257, 274, 307
 A. tucuma *see* *A. aculeatum*
 A. vulgare (tucumã do Pará) 209, 308
 ata (*Annona* spp.) 220, 305
 ata brava (*Rollinia* spp.) 215, 216, 220, 305
 ata preta (*Rollinia* spp.) 220
Ateles belzebuth (coatá; long-haired spider monkey; macaco aranha; white-bellied spider monkey) 195, 309
 Atlantic City Boardwalk, USA 81
 Atlantic forest 47, 101, 227
Attalea [syn. *Maximiliana*; *Orbignya*]
 A. butyracea (jaci) 183, 190, 307
 A. funifera (piaçava; piassava) 257, 308
 A. maripa (curcurita; inajá) 142, 183-90, 286, 288, 303
 A. phalerata (uricuri; aricuri) 183, 190, 308
 A. speciosa (babaçu; babassu) 107, 142, 183, 186, 190, 272, 305
 A. tessmannii (cocão) 225, 306
 ayahuasca (daime; jagube vine; *Banisteriopsis caapi*) 270, 285, 307
 ayahuasco 270, 290
 azeitona brava (*Eugenia egensis*) 218, 305
 azeitona da mata (*Eugenia egensis*) 215, 218, 305
 Azevedo, Tasso Rezende de xiii, xvii, xviii, 262
- B**
 babaçu (babassu; *Attalea speciosa*) 107, 142, 183, 186, 190, 272, 305
 babassu (babaçu; *Attalea speciosa*) 107, 142, 183, 186, 190, 272, 305
 babassu breakers 272, 285
 baby hammocks 161
 bacaba (*Oenocarpus bacaba*) 142, 194, 258, 305
 backpacks 123
Bactris gasipaes (peach palm; pupunha) 150, 197-204, 271, 287, 292, 298, 303
 bacuri
 (bacuripari; *Garcinia [Rheedia] macrophylla*) 47, 259
 (*Platonia insignis*) 4, 17-18, 39-48, 119, 143, 240-1, 258, 259, 276, 286, 287, 288, 291, 296, 303
 bacuri de espinho (*Garcinia madruno*) 47
 bacuri fruit 259
 consumption 144, 239
 bacuri latex 39, 43, 44
 bacuri mirim (*Garcinia [Rheedia] gardneriana*) 47
 bacuri oil
 uses 43
 bacuri da várzea (*Tovomita* spp.) 216, 305
 bacuripari (bacuri; *Garcinia [Rheedia] macrophylla*) 47, 259
 bacuripari liso (*Garcinia [Rheedia] brasiliensis*) 47, 216, 305
Bagassa guianensis (tatajuba) 21, 115, 308
 bags 123, 257
 Bahia State, Brazil 199
 Bahia State Electric Company *see* Companhia de Eletricidade do Estado da Bahia
 Baixo Tocantins, Pará State, Brazil 236, 237
 bamboo 82, 128, 218, 220
 (*Guadua weberbaueri*) 293

- Banisteriopsis caapi* (ayahuasca; daime; jagube vine) 270, 285, 307
- barbatimão (*Stryphnodendron barbatiman*) 86, 305
- Barinas, Venezuela 47
- bark 5
- andiroba
 - prices 32
 - uses 29, 32
 - Brazil nut
 - uses 52
 - cat's claw
 - preparation for market 68
 - uses 68, 69
 - yield 66
 - copaíba
 - uses 73, 74
 - ipê-roxo (pau d'arco) 85
 - harvesting 84, 89
 - regrowth 84, 99
 - uses 81, 83-4
 - yield 82
 - jatobá
 - harvesting 99
 - identification 95
 - regrowth 99
 - uses 91, 94
 - yield 92
 - uxi
 - uses 139, 142
- bark removal
- cat's claw 68
 - ipê-roxo (pau d'arco) 89
 - jatobá 99
 - titica 132
- Barquinho 270
- baskets 129, 133, 157, 159, 161, 178
- bastard mahogany *see* andiroba
- Batista Aguinaldo 278
- bats
- great-fruit-eating 151, 309
 - pollination by 117
 - seed dispersal by 151
 - Thomas's [long-tongued] nectar 117, 311
- Bauhinia guianensis* (escada-de-jabutí) 69, 306
- beams, house 171
- beauty products 51, 112, 142, 171, 178
- creams 74
 - perfumes 117
 - shampoos 56, 74, 179
 - soaps 32, 34, 36, 43, 52, 73, 74, 112, 113, 143, 147, 178, 179, 185, 186, 213, 251, 257, 272
- bee-keeping 237
- bees 45, 57, 99, 294
- pollination by 57, 58, 63, 72
- Belém, Pará State, Brazil xxi, xxiv(map), 2(map), 23, 32, 40, 41, 43, 51, 67, 73, 74, 83, 86, 88, 104, 121, 131, 139, 140, 142-3, 149, 150, 159-60, 165, 176, 177, 185, 199, 226, 228, 296
- Açaí Fair 41, 159
 - Bosque Rodrigues Alves 23
 - Círio de Nazaré festival 177
 - Museu Paraense Emílio Goeldi xviii, xv, xvi, xx, 58, 163, 234, 291
 - Ver-o-Peso market 41, 67, 73, 92, 111, 141, 157, 184, 193
- belts 178
- Beni, Bolivia 286, 289
- Benjamin Constant, Pará State, Brazil 260, 294
- Bernard, Enrico xvi, 151
- Bertholletia excelsa* (Brazil nut; castanheira) xxii, 1, 4, 6, 11, 21, 49-64, 142, 285, 286, 287, 292, 293, 294, 297, 298, 303
- biodiversity 3, 97, 287
- biodiversity loss 288
- prevention 263
- biofuels 71, 74, 94, 297
- birdcages 178
- birds
- pollination by 45
 - seed dispersal by 158, 172
 - see also under species*
- biribá (*Rollinia* spp.) 150, 215, 216, 220, 287, 291, 305
- biribá brava (*Rollinia* spp.) 220, 305
- biscuits
- recipes 54
 - bitter amapá (amapá amargo; *Parahancornia fasciculata*) 85, 87, 88, 260, 295, 296, 305
- Bixa orellana* (annatto; urucu) 29, 32, 308
- black amapá (amapá preto; *Couma guianensis*) 87, 88, 305
- black-capped capuchin (brown capuchin; macaco prego; tufted capuchin; *Cebus apella*) 57, 165, 310
- black-finned pacu (tambaqui; *Colossoma macropomum*) 125, 261, 316
- black piranha (piranha negra; *Serrasalmus niger*) 125, 316
- 'blood of the cow' *see* açaí
- blue and gold macaw (arara canindé; blue and yellow macaw; *Ara ararauna*) 181, 312
- blue-grey tanager (sanhaçu da amazônia; *Thraupis episcopus*) 45, 315
- blue and yellow macaw (arara canindé; blue and gold macaw; *Ara ararauna*) 181, 312
- boa constrictors 261
- Boa Vista, Pará State, Brazil 110, 140

- 'board oil' 34
- boats 20, 43, 83, 109, 221, 241, 259
 canoes 94, 111, 112
 riverboats 112
 yachts 105
 see also ships, historical
- body paints 29, 32
- body weight 146
- Boim, Pará State, Brazil 126
- bolas* (*castanhais*) 50, 62, 289
- Bolivia xxi, xxiv(map), 2(map), 3, 49, 51, 58, 59, 63, 65, 102, 121, 122, 171, 173, 191, 204, 217, 220, 227, 298
 Beni 286, 289
 Pando 2(map), 216, 224
 Santa Cruz de la Sierra 2(map), 47
- Bombus* spp. 57
- book covers 178
- Borojoa* spp. 215, 219, 305, 308
- Bosque Rodrigues Alves, Belém, Pará State, Brazil 23
- botanical gardens
 Belém, Brazil 23
 London, UK 126
 New York, USA xv, xvi, xvii, xviii, xx
- Boufleuer, Neuza xvi, 37
- Bowdichia virgilioides* (sucupira) 258, 308
- Bradypus*
 B. tridactylus (pale-throated three-toed sloth; preguiça bento) 309
 B. variegatus (brown-throated three-toed sloth; preguiça branca) 116, 309
- Bragança, Pará State, Brazil 2(map), 41, 178, 186, 260
- Bragantina, Pará State, Brazil 40, 45, 139
- Brasiléia, Acre State, Brazil 2(map), 103
- Brasília, Federal University of (UnB), Brazil 179
- Braz, Senhor (traditional healer) v
- Brazil 65, 67, 71, 73, 81, 102, 122, 129, 134, 175, 217
 Amazonia xxiv(map), 3
 legal Brazilian Amazon 2(map)
 major rivers xxiv(map)
 states and places mentioned 2(map)
 see also under states Acre; Amapá; Amazonas; Bahia; Ceará; Espírito Santo; Maranhão; Mato Grosso; Minas Gerais; Pará; Paraná; Piauí; Rio Grande do Sul; Rio de Janeiro; Rondônia; Roraima; São Paulo and Tocantins
- brazil nut industry 292
 sustainability 293
- Brazil nut oil 51, 53
 uses 52
- Brazil-nut poison frog (*Dendrobates* [*Adelphobates*] *castaneoticus*) 57, 316
- Brazil nut tree (*castanheira*; *Bertholletia excelsa*)
 xxii, 1, 4, 6, 11, 21, 49-64, 142, 285, 286, 287, 292, 293, 294, 297, 298, 303
- Brazil nuts 223, 258
 fungal toxins 51
 protein content 4, 49, 54
- Brazilian Cherry (wood) *see* jatobá
- Brazilian ebony (ebony; *Diospyros* spp.) 273, 306
- Brazilian Forest Service xv, xvii, xx
- Brazilian giant tortoise (forest tortoise; jabuti branco; jabuti-carumbé; jabuti-do-pé-amarelo; South American yellow-footed tortoise; *Geochelone denticulata*) 115, 316
- Brazilian Institute of Environment and Renewable Natural Resources *see* Instituto Brasileiro do Meio Ambiente e dos Recursos Natureis Renováveis
- Brazilian porcupine (coendu; porco espinho; quandu; *Coendou prehensilis*) 195, 281, 310
- Brazilian rosewood (jacarandá da Bahia; *Dalbergia nigra*) 273, 307
- Brazilian tapir (anta; lowland tapir; *Tapirus terrestris*) 142, 148, 178, 181, 195, 312
- bread 199
 recipes 96
- breu (breu branco; *Protium* spp.) 33, 147, 221, 273, 305
- breu branco (breu; *Protium* spp.) 33, 147, 221, 273, 305
- Breves, Pará State, Brazil 2(map), 139
- bridges 161, 175, 178, 193
- Brito, João xvii, 253
- Brito, João Fernandes Moreira and family xvi, 146
- Brondizio, Eduardo xiv, xviii, 157
- brooms 131, 161, 171, 257
- Brosimum*
 B. acutifolium (mururé) 258, 282, 307
 B. parinarioides (amapá doce; sweet amapá) 87, 88, 289, 305
 B. rubescens (pau-rainha) 273, 307
- Brotogeris chrysoptera* (golden-winged parakeet; periquito de asa dourada; periquito de asa vermelha) 45, 46, 313
- Brown, Foster xvi, xviii, 78, 79
- brown capuchin (black-capped capuchin; macaco prego; tufted capuchin; *Cebus apella*) 57, 165, 310
- brown-throated three-toed sloth (preguiça branca; *Bradypus variegatus*) 116, 309
- buffalo leather 274
- buildings 112, 161, 259
 beams 171
 house frames 131
 roofing 32, 42, 43, 171, 183, 185, 258
- buiuçu seeds
 uses 274

- buriti (aguaje; moriche palm; *Mauritia* spp.) 4, 175-82, 216, 283, 287, 290, 293, 295, 303
- buriti oil
extraction 180
uses 178, 179, 292
- burning *see* fires *and* swidden agriculture
- Byrsonima crassifolia* (murici) 286
- C**
- cabeça de urubu (*Theobroma obovatum*) 223
- Caboclo Workshops of the Tapajós *see* Oficinas
- Caboclas do Tapajós
- caboclos xxi, 126, 161, 138, 146, 149, 164, 168, 180, 191, 245, 286, 291, 292, 295
- cacao (*Theobroma cacao*) 36, 164, 222, 223, 288, 305
- cacao jacaré (cacaú jacaré; *Herrania* [*Theobroma*] *mariae*; *H. nitida*) 222, 223, 306
- cacaú (*Theobroma* spp.) 215, 222-3, 305
- cacaú jacaré (cacao jacaré; *Herrania* [*Theobroma*] *mariae*; *H. nitida*) 222, 223, 306
- cacaú de macaco (*Theobroma obovatum*) 223, 306
- cacaú do Peru (*Theobroma obovatum*) 306
- cacaú (*Theobroma* spp.) 222-3
(*Theobroma speciosum*) 223, 306
- cacaurana (*Theobroma* spp.) 222-3
(*Theobroma microcarpum*; *T. obovatum*) 223, 306
- Cacicus cela* (yellow-rumped cacique; xexéu) 45, 313
- cacique, yellow-rumped 45, 313
- cafés serving traditional Amazonian foods 209-10
- caiman 261
- caissuma 202
- cajá (*Spondias* spp.) 215, 224
(*Spondias globosa*; *S. mombin*) 224, 306
- cajá-açu (*Spondias mombin* x *testudinis*) 224, 306
- cajá de jaboti (*Spondias* spp.) 224
(*Spondias testudinis*) 216, 224, 306
- Cajarana (from Capim Community) xvii
- cajarana (*Spondias* spp.) 215, 224
(*Spondias dulcis*; *S. testudinis*) 216, 224, 306
- cakes 161, 199
recipes 55, 195, 201
- calcium, dietary 44, 54, 87, 146, 164
- calendar diagrams 13
- California State University (CSU), Stanislaus, USA
xiv, xx
- calories 186, 209
per 100g
açáí juice 172
açáí pulp 164
bacuri pulp 44
jatobá fruit 95
pataúá oil 194
uxi pulp 146
- Calvacante, Paulo 149
- Cametá, Pará State, Brazil 2(map), 32, 34, 35, 162
- Campinas, University of (UNICAMP), Brazil xvii
- Campos, Carlos xvi, 79
- camu-camu (*Myrciaria dubia*) 216, 306
- canned açáí 162
- Capanema, Pará State, Brazil 2(map), 186
- Capim Community xvii
- Capim river xxiv(map)
- Capim river area, Pará State, Brazil 42-3, 73, 76, 97, 110-11, 115, 117, 139, 141, 143, 144, 146, 148, 187-9, 238-44, 247, 253, 291
- capoeira xxi, 258
- capybaras 275
- Caquetá, Colombia 172, 223
- car accessories 123
- Carajás, Pará State, Brazil 60-1, 91, 294
- Carapa guianensis* (andiroba) 11, 21, 29-38, 85, 166, 271, 291, 294, 303
- carbohydrates, dietary 112, 146, 194, 200
- carbon cycling 297
- carimbó xxi, 274, 281
- carotene 179, 200, 204, 209, 295
- carpentry 142
- carpets 161
- Carvalho, José Edmar Urano de xiv, xv, xviii, 39, 139
- Caryocar* 294
C. villosum (piquiá) v, 5, 6, 9, 13, 18, 109-19, 143, 150, 236, 258, 275, 285, 289, 303
- Caryodendron amazonicum* (castanha de porco; castanhinha; castanhola) 225, 306
- castanha de porco (castanhinha; castanhola; *Caryodendron amazonicum*) 225, 306
- castanhais (bolas) 50, 62, 289
- castanheira (Brazil nut; *Bertholletia excelsa*) xxii, 1, 4, 6, 11, 21, 49-64, 142, 285, 286, 287, 292, 293, 294, 297, 298
- castanhinha (castanha de porco; castanhola; *Caryodendron amazonicum*) 225, 306
- castanhola (castanha de porco; castanhinha; *Caryodendron amazonicum*) 225, 306
- catitu (collared peccary; *Tayassu tajacu*) 116, 119, 148, 181, 189, 312
- cat's claw (jupindá; unha-de-gato; *Uncaria guianensis*; *U. tomentosa*) 65-70, 285, 289, 290, 292, 303
species differences 68
- cattle
foot-and-mouth disease 75
salt supplements 193
- cattle ranching 60, 124, 235, 257, 288, 293

- caustic soda 113, 136, 143, 147
 cautions *see* health and safety cautions
 Caxuanã National Forest, Pará State, Brazil 50
 CAY Herbarium, French Guiana xvi, xviii
 Ceará State, Brazil 2(map), 286
Cebus apella (black-capped capuchin; brown capuchin; tufted capuchin; macaco prego) 57, 165, 310
Cecropia spp. (imbaúba) 274, 307
Cedrela odorata (cedro) 69, 142, 258, 273, 306
 cedro (*Cedrela odorata*) 69, 142, 258, 273, 306
 ‘cemeteries’ of Brazil nut trees 60-1, 286
 Center for Amazon Community Ecology xiv, xvi, xx
 Center of Amazonian Workers *see* Centro dos Trabalhadores da Amazônia
 Center for International Forestry Research (CIFOR) iv, ix, xiv, xv, xvi, xvii
 Central America 47, 91, 102, 197, 203, 217, 218, 219
Centris spp. 57
 Centro dos Trabalhadores da Amazônia (CTA) viii, xvi, 93
 cerejeira (*Amburana acreana*) 93, 306
 cerrado xxi, 72
 certification
 forest 297
 forest products 106, 262, 263, 293, 296
 standards 251
 CGIAR *see* Consultative Group on International Agricultural Research
 chachalacas (aracua; *Ortalis* spp.) 165, 181, 275, 314
 Chacobo Indians 286
 chacrona (*Psychotria viridis*) 270, 306
 charcoal, Brazil nut 52
Chenopodium ambrosioides (mastruz; wormseed) 86, 307
 Cherry, Brazilian (wood) *see* jatobá
 chica-chica (pupunha brava; wild pupunha; *Aiphanes aculeata*) 204, 308
 chicha 171
 chicken dishes
 recipes 55
 Chico Mendes Extractive Reserve, Acre State, Brazil 50, 192, 193
 Chico Mendes Law 123
 children 39, 109, 111, 145, 161, 179, 185, 236
 see also generations, future human
 Chimanes Forest, Beni, Bolivia 289
 China 59
 Chino, Peru 188
 chocolate 222, 223
 chontaduro *see* pupunha
 chontaruru *see* pupunha
Choroepus didactylus (preguiça real; southern two-toed sloth) 310
 chromium, dietary 200
 Chuva (from Joira) 148
 CI *see* Conservation International
 CIFOR *see* Center for International Forestry Research
 cipó titica (nibbi; titica; *Heteropsis flexuosa*) 129-38, 288, 289; 293, 294, 297, 303
 circumference of trees 246
 measurement 245
 see also growth (circumference)
 Círio de Nazaré festival, Belém 177
 CITES *see* Convention on International Trade in Endangered Species of Wild Fauna and Flora
 cities *see* urban areas
 Clement, Charles R. xv, xviii, 197
 climate change 1, 258
 cloned trees 128
 clothing 123, 143, 257
 CNS *see* Conselho Nacional dos Seringueiros
 coal 52, 83
 coatá (macaco aranha; white-bellied [long-haired] spider monkey; *Ateles belzebuth*) 195, 309
 coati, South American (coatimundi; quati; quatumundé; *Nasua nasua*) 112, 148, 181, 186, 281, 311
 coatimundi (quati; quatumundé; South American coati; *Nasua nasua*) 112, 148, 181, 186, 281, 311
 cocão (*Attalea tessmannii*) 225, 306
 cocão oils 225
 coconut (*Cocos nucifera*) 306
Cocos nucifera (coconut) 306
 COELBA *see* Companhia de Eletricidade do Estado da Bahia
Coendou prehensilis (Brazilian porcupine; coendu; porco espinho; quandu) 195, 281, 310
 coendu (Brazilian porcupine, porco espinho; quando; *Coendou prehensilis*) 195, 281, 310
 collared peccary (catitu; *Tayassu tajacu*) 116, 119, 148, 181, 189, 312
 collecting forest products *see* extraction and harvesting of forest products
 Colombia xxiv(map), 2(map), 39, 47, 49, 65, 102, 191, 192, 197, 199, 202, 204, 205, 223, 228
 Caquetá 172, 223
 Tinigua National Park 296
Colossoma macropomum (black-finned pacu; tambaqui) 125, 261, 316
 colourings *see* food colourings and paints
 Comitê de Porto de Moz xvi
 communities
 reflections on timber sales 236-7, 252-3

- community forest management viii, 20, 118, 141
 cost-benefit analyses 16-18
 initiatives 264-6
 multiple-use management 255-66
 titica vine 136-7
see also indigenous forest management
- community forest reserves 247, 256, 259, 260, 261, 286
 management plans 260
- community forests 8, 189, 237
- community reinforcement
 role of women viii
- Companhia de Eletricidade do Estado da Bahia (COELBA) xiv, xvi, xx
- comparisons *see* cost-benefit comparisons
- compass use 79
- condoms 123
- conflicting forest uses 5, 119, 233-54, 289
- Conselho Nacional dos Seringueiros (CNS) xiii, xv, xvi, xviii, 18
- Conservation International (CI) xv, xvi
- construction 74, 94, 149, 193, 209, 260
see also boats; bridges *and* buildings
- Consultative Group on International Agricultural Research (CGIAR) xx
- consumers
 and certified forest products 106, 262, 263
- consumption
 bacuri fruit 144, 239
 piquiá fruit 5, 144, 239-40, 242
 uxi fruit 143, 144, 239
- containers
 inajá 185
 latex bowls 52, 124
- contracts, timber sales 247, 254, 295
- contraindications *see* health and safety cautions
- conure, white-eyed 45, 313
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 86, 106, 286, 289, 296
- cooking pans, removal of latex from 44
- copaíba (*Copaifera* spp.) 2, 4, 5, 21, 69, 71-80, 85, 93, 115, 271, 297, 303
- copaíba oil 285, 289
 extraction 71, 75, 76, 285, 290, 294
 prices 73
 uses 71, 74
 variations 73
 yields 72
- Copaifera* (copaíba) 2, 4, 5, 21, 69, 71-80, 85, 93, 115, 271, 297, 303
C. multijuga 285, 297
- copper, dietary 164
- Cordeiro, Silvia iv
- Cordia goeldiana* (freijó) 273, 306
- Cordillera de la Costa, Venezuela 204
- cords 178, 193
- Cordyceps* spp. 138
- cosmetics products *see* beauty products
- Cosson, Maria 54
- cost-benefit analyses
 community forest management 16-18
- cost-benefit comparisons
 bacuri fruit/farinha 42
 bacuri fruit/timber sales 42-3, 143
 furniture-making/timber sales 261
 game hunting/buying meat 117, 187-9
 game hunting/farinha 187-9
 jatobá seeds/timber sales 93
 piquiá fruit/timber sales 143
 titica fibre/crafts 133, 137
 uxi fruit/timber sales 143, 145
- Costa, E. xvii, 257
- Costa, Jarbas Anute xv, xviii, 205
- Costa Rica 197, 199, 223, 227
 La Selva 31
- Couma guianensis* (amapá preto; black amapá) 87, 88, 305
- craftsmanship *see* handicrafts *and under items* crafted
- Crax* spp. (curassow; mutum; mutum branco; mutum de penacho) 97, 172, 195, 210, 313
- creams, beauty 74
- credit programs 265
- Cree Indians 21
- crèmes xxi
 recipes 44, 146, 181
- Crepidosperrum* spp. 221
- Creuza, Maria xvi, 136
- Cristina da Silva, Fátima xiii, xvi, xviii, 18
- Croton cajucara* (sacaca) 86, 308
C. lechleri (sangre-de-grado) 69, 308
- Cruzeiro do Sul, Acre State, Brazil 2(map), 213
- Crypturellus* spp. (inhambu; nambu; tinamou) 165, 259, 315
- CSU *see* California State University
- CTA *see* Centro dos Trabalhadores da Amazônia
- cucurita (inajá; *Attalea maripa*) 142, 183-90, 286, 288, 303
- cuia 274
- culture, forest 267-83, 285, 296, 298
 continuity 167
 revival 22, 274
- cumaru (*Dipteryx odorata*) 5, 85, 93, 259, 306
- cumatê (*Myrcia atramentifidera*) 259
- Cunha, Magna xvii, 266

- Cunha, Manuel 18
 cupiúba (*Goupia glabra*) 259
 cupuaçu (*Theobroma grandiflorum*) 44, 56, 61, 150, 164, 222, 223, 286, 287, 306
 'cupuaçu salami' 223
 cupuí (*Theobroma* spp.) 222-3
 curassow (mutum; mutum branco; mutum de penacho; *Crax* spp.) 97, 172, 195, 210, 313
 razor-billed (mutum cavalo; mutum preto; *Mitu tuberosum*) 97, 314
 curcuma 52
 Curupira xxi, 267, 268, 282
 cutia (agouti; *Dasyprocta* spp.) 36, 57, 59, 76, 97, 108, 112, 115, 116, 117, 119, 141, 148, 165, 186, 189, 202, 206, 210, 211, 212, 259, 275, 310
 Cuvier's toucan (tucano grande de papo branco; white-throated toucan; *Ramphastos tucanus*) 195, 315
Cyanerpes caeruleus (purple honeycreeper; saí de perna amarela; saí púrpura) 45, 313
 cyanide xxii
 Cymerys, Margaret iv, viii, xiv, xv, xvi, xviii, 43, 49, 97, 109, 157, 175, 183, 197, 233
- D**
Dacryodes spp. 221
 daime (ayahuasca; jagube vine; *Banisteriopsis caapi*) 270, 285, 307
Dalbergia 69, 86, 308
 D. monetaria (veronica) 308
 D. nigra (jacarandá da Bahia; Brazilian rosewood) 273, 307
 D. subcymosa (veronica) 86, 308
 Daly, Douglas C. xv, xvi, xvii, xviii, 3, 47, 204, 213, 215
 damage to trees 94, 119
 by predatory logging 119, 239
 by wind 102, 241
 dams *see* hydroelectric projects
Dasyprocta spp. (agouti; cutia) 36, 57, 59, 76, 97, 108, 112, 115, 116, 117, 119, 141, 148, 165, 186, 189, 202, 206, 210, 211, 212, 259, 275, 310
Dasypus spp. 57, 112, 117, 141, 148, 186, 189, 210, 259
 D. novemcinctus (nine-banded armadillo; nine-banded long-nosed armadillo; tatu; tatu branco; tatu galinha) 115, 116, 310
 D. septemcinctus (seven-banded armadillo; seven-banded long-nosed armadillo; tatu pretinho; tatuí) 115, 310
Daughters of the Canopy (film) 16, 291
 dbh (diameter at breast height) xxi, 13
 debt peonage 126
 decking 83, 90
 deer 57, 76, 97, 112, 117, 141, 142, 148, 165, 178, 181, 186, 195, 202, 210, 275
 grey brocket 119, 172, 181, 311
 red brocket 115, 116, 119, 172, 181, 311
 deficiencies, dietary 4, 179
 deforestation 61, 292
 and cattle ranching 60, 124, 235, 288
 and hydroelectric projects 60
 rate of 1
 see also logging
 degraded land
 regeneration 39, 226
 tree-planting on 37, 62
 Delprete, Piero G. xvi, xviii, 219
 dendê (African oil palm; *Elaeis guineensis*) xxii, 142, 306
 dendê oil 179
Dendrobates
 D. castaneoticus (*Adelphobates castaneoticus*; Brazil-nut poison frog) 57, 316
 D. quinquevittatus (*Adelphobates quinquevittatus*; Amazonian poison frog) 57, 286, 316
 Dendrogene Project *see* Projeto Dendrogene
 density 13
 açáí 158, 168
 açáí (solitary) 170
 amapá 88
 andiroba 30
 bacuri 40
 Brazil nut 50, 58
 buriti 176
 cat's claw 66, 68
 copaíba 72
 inajá 184
 ipê-roxo 82
 jatobá 92
 mahogany 102
 patauí 192
 piquiá 110
 pupunha 198
 rubber tree 122
 titica 130
 tucumã of Amazonas 206
 uxi 140
 deodorants 179
 development models
 economic and social fairness viii
 Dewi, S. xvii, 257
 diameter of fruit trees *see* dbh (diameter at breast height); growth (diameter) *and* production, average diameter for
 Dias, André xv, xvi, xvii, 31, 35, 245

- Dias de Souza, Alexandre xiv, xvi, xviii, 81, 99, 121
 diesel oil tree *see* copaíba
 diet
 deficiencies 4, 179
 differences, cost-benefit *see* cost-benefit comparisons
 differences, gender
 vine harvesting 137
 differences, regional
 flowering and fruiting seasons 13
 differences, species
 amapá 87
 cat's claw 68
 jatobá 95
 tucumã 209
 differences, varietal
 açai 161
Diospyros spp. (Brazilian ebony; ebony) 273, 306
Dipteryx odorata (cumaru) 5, 85, 93, 259, 306
 disease prevention viii, 4
 dispersal *see* seed dispersal
 distribution of mahogany trees 102
 diversification 251, 288
 diversity
 and security 266
 see also biodiversity *and* diversification
 Dois Irmãos, Rio Grande do Sul State, Brazil
 drinks
 cacao 223
 chicha 171
 inajá (recipe) 186
 pupunha 202
 see also juices *and* nut milks
 dry forest 192, 227
 durability of forest crafts 131
 dyes 112
- E**
 eagle, harpy 97, 314
 Earth Love Fund iv
 ebony (Brazilian ebony; *Diospyros* spp.) 273, 306
 ecology 13
 açai 158-9
 açai (solitary) 170
 andiroba 30-1, 291, 294
 bacuri 40-1
 Brazil nut 50-1
 buriti 176
 cat's claw 66
 copaíba 72
 inajá 184
 ipê-roxo 82
 jatobá 92
 mahogany 102
 patauá 192
 piquiá 110
 pupunha 198-9
 rubber tree 122
 titica 130
 tucumã of Amazonas 206
 uxi 140-1
 economic value of forest products 14, 17
 açai 159-60
 açai (solitary) 171
 andiroba 32
 bacuri 41-3, 17-18
 Brazil nut 51
 buriti 177
 cat's claw 67
 copaíba 73
 inajá 184
 ipê-roxo 83
 jatobá 92-3
 maçaranduba 244
 mahogany 21, 104
 patauá 193
 piquiá 111, 244
 pupunha 198
 rubber tree 123
 titica 131, 133
 tucumã of Amazonas 208
 uxi 141
 see also adding value to forest products
 ecosystem services *see* air:quality; pollination; seed dispersal *and* water:quality
 Ecuador xxiv(map), 2(map), 47, 102, 191, 192, 197, 199, 223, 228, 270
 Educational Foundation of America iv
 educational programs 265
 educational use of this book 16-23
 educators 9
Elaeis guineensis (African oil palm; dendê) xxii, 142, 306
 elderly people
 elders in the community 18, 36, 270
 forest product consumers 74
 electricity generation 179
 Emanuela Women's Association 135, 136, 288
 Embrapa *see* Empresa Brasileira de Pesquisa Agropecuária
 empates 124
 Empresa Brasileira de Pesquisa Agropecuária (Embrapa) xiii, xx, 21
 Acre xiv, xix, xx
 Eastern Amazon xiv, xv, xvi, xvii, xviii, xix
 Western Amazon xv, xvi, xix, xx
 endocarp xxii, 142, 225

- Endopleura uchi* (uchi; uxi) 2, 11, 12, 20, 44, 116, 119, 139-52, 216, 258, 287, 291, 296, 303
- envira caju (*Onychopetalum krukovii*; *O. periquino*) 216, 226, 306
- environmental education viii
- Epicharis* spp. 57
- Epitaciolândia, Acre State, Brazil 2(map), 170
- ESALQ *see* Escola Superior de Agricultura “Luiz de Queiroz”
- escada-de-jabutí (*Bauhinia guianensis*) 69, 306
- Escola Agrotécnica Federal de Manaus xvi
- Escola Superior de Agricultura “Luiz de Queiroz” (ESALQ) xiv
- Espírito Santo State, Brazil 2(map), 199
- esquilo (quatipuru; squirrel; *Sciurus* spp.) 36, 57, 76, 141, 142, 148, 186, 210, 312
- estimations
- height of trees 245
 - productivity 31
- Etherington, Tina iv, xiii
- ethnopharmacology 296
- ethnovarieties 161
- Eugenia* 215, 216, 218
- E. egensis* (azeitona brava; azeitona da mata) 215, 218, 305
 - E. feijoi* (araçá) 216, 218, 305
 - E. stipitata* (araçá-boi) 218, 305
- Eulaemia* spp. 57
- Europe
- imports
 - açai 164
 - andiroba oil 32
 - Brazil nut oil 53
 - Brazil nuts 51, 293
 - copaíba oil 73
 - ipê-roxo bark (pau d’arco) 81
 - jatobá timber 99
 - mahogany timber 104
- Euterpe*
- E. oleracea* (multi-stemmed açai) 4, 9, 44, 157-68, 216, 263, 286, 288, 290, 294, 303
 - E. precatoria* (solitary açai) viii, 169-74, 263, 287, 294, 303
- Evangelista, Maria Inês S. xvii, 271
- evil spirits, protection from 139, 209
- exports
- açai 160, 164
 - andiroba oil 32
 - Brazil nut oil 53
 - Brazil nuts 51, 293
 - cat’s claw 67
 - copaíba 73
 - ipê-roxo bark 81
 - ipê-roxo timber 90
 - jatobá timber 99-100
 - mahogany timber 104
 - patauá oil 193
 - pupunha palm hearts 199
 - rubber 126
 - vegetable leather 125
- extensionists 8, 20
- extraction, latex
- amapá 88
 - rubber 127
 - see also* rubber tapping
- extraction, oil
- andiroba 33-5, 294
 - buriti 180
 - copaíba 71, 75, 76, 285, 290, 294
 - inajá 186
 - patauá 192, 195
 - piquiá 113
 - uxi 147
- extraction tools 75, 87
- Extractive Reserves 18, 121, 287, 288, 290, 297
- Alto Juruá, Acre State, Brazil 257, 285
 - Chico Mendes, Acre State, Brazil 50, 192, 193, 285, 292
 - Mapuá, Pará State, Brazil 18
- F**
- fair trade certification 262
- fairness, economic and social viii
- fairs and festivals 175
- Açai Fair, Belém 41, 159
 - açai festivals, eastern Amazonia 162
 - Círio de Nazaré festival, Belém 177
 - forest product fairs, Acre 125, 133, 298
 - Muritifest, Abaetetuba 177
 - pupunha harvest festivals 202
- fallow plots 207, 259
- false mahogany *see* andiroba
- fans 161
- FAO *see* Food and Agriculture Organization of the United Nations
- Faria, Lênio José Guerreiro de xvi, 52, 95
- Farias, Ronaldo xvi, xvii, 145, 274, 282
- farinha xxii, xxiii, 42, 52, 117, 171, 172, 186, 191
- cost-benefit comparisons
 - with hunting game 187-9
 - with selling bacuri fruit 42
- Fase Garupá xvi
- fashion 125
- fats, dietary 54, 112, 194
- fatty acids 4, 164
- lauric acid 179

- oleic acid 146, 179
- feather dusters 185
- Felis pardalis* *see* *Leopardus pardalis*
- Felix, José 282
- fencing 112, 131, 193, 259
- Fernandes, Delomarque xvii, 142
- Ferraz, Pedro Albuquerque xiv, xviii, 121
- Ferreira, Evandro xv, xviii, 169, 183
- Ferreira, Sidney xvi 211
- Ferreira, Socorro xiv, xvii, xix, 39, 259
- fertilizers 161, 178, 179, 198
 - for orchids 163
 - from vines 166
- festivals *see* fairs and festivals
- FFT *see* Fundação Floresta Tropical
- fibre, dietary 44, 112, 146
- Ficus dendroica* (gameleira) 123, 306
- fields and pastures 86, 97, 127, 183, 190, 198, 203, 205, 206, 207, 211, 212, 258
 - see also* fires *and* swidden agriculture
- films
 - Daughters of the Canopy* 16, 291
- FIOCRUZ xiv, xvi
- fire-resistant species
 - bacuri 40
 - cat's claw 70
 - palms 183, 190, 205
- fires 1, 63, 97, 235, 239, 241, 276, 287, 292, 296
 - accidental 242
 - and ant control 149
 - firebreaks 237, 258
 - regeneration after 40, 117, 130, 190, 206, 211, 234
 - risk of 5, 185
 - tree-planting after 107
 - see also* swidden agriculture
- fish traps 185
- flavonoids 164
- flavourings *see* food flavourings
- flooded lowland forest 13, 125, 170, 171, 192, 291
 - permanent (igapó) xxii, 47, 158
 - seasonal/tidal (várzea) xxiii, 30, 31, 47, 66, 158, 165, 175, 216, 217, 218, 219, 220, 224, 226, 227, 282
 - for unflooded forest see* dry forest *and* terra firme forest
- floodplain gardens ('roçados de várzea') 168
- flooring 99, 100
- FLORA Forest Products Market, Acre 125, 133
- Florida, USA 248-9
- Florida, University of (UF), USA xiv, xvii, xix, xx
- flour
 - farinha xxii, xxiii, 42, 52, 117, 171, 172, 186, 187-9, 191
 - ipuruna (buriti) 180
 - jatobá 95
 - pupunha 199, 202
 - recipes 96
- flower and fruit seasons 13
 - abiorana 217
 - açaí 158
 - açaí (solitary) 170
 - andiroba 30
 - apuruí 219
 - araca 218
 - ata brava 220
 - azeitona 218
 - bacuri 40
 - biribá 220
 - Brazil nut 50
 - buriti 176
 - cacao 223
 - cajá 224
 - cat's claw 66
 - copaíba 72, 75
 - inajá 184
 - ipê-roxo 82
 - jatobá 92
 - mahogany 102
 - pariri 217
 - patauá 192
 - piquiá 110
 - pupunha 198
 - rubber tree 122
 - titica 130
 - tucumã of Amazonas 206
 - uxi 140
- flowers
 - piquiá 114
 - uses 112
- fluctuations in productivity 30, 50, 92
- folklore
 - legends 124, 138, 163, 267-9
 - mythical creatures xxi, xxii, 267-9, 282
- Food and Agriculture Organization of the United Nations (FAO) iv, xiii
 - NWFPs Programme ix
- food colourings 52
- food flavourings 139, 141, 161
- foot-and-mouth disease 75
- forest impoverishment 5
- forest land use changes 235
- forest loss 20, 236-7, 292
- forest management *see* agroforestry management; community forest management *and* indigenous forest management
- forest protection v, xxi

- by communities 258
 - laws 63, 77, 99, 106, 136, 162, 295
 - role of legends in 268-9
 - by rubber tappers 124
 - forest reserves *see* community forest reserves *and* Extractive Reserves
 - Forest Stewardship Council (FSC) 262, 263
 - forest tortoise (Brazilian giant tortoise; jabuti branco; jabuti-carumbé; jabuti-do-pé-amarelo; South American yellow-footed tortoise; *Geochelone denticulata*) 115, 316
 - foresters 8
 - Forestry Certification courses 19
 - forestry terms xxi-iii
 - forestry training 265
 - fork-tailed palm swift (andorinhão do buriti; tesorinha; *Tachornis squamata*) 181, 315
 - France
 - imports
 - copaíba oil 73
 - vegetable leather 125
 - Francon volume 246
 - Freiburg, University of, Germany xix
 - freijó (*Cordia goeldiana*) 273, 306
 - Freijó, Acre State, Brazil 272
 - Freitas, Aurélio xvi, 212
 - Freitas, Raimundo Graça S. de xiv, 121
 - French Guiana xxiv(map), 2(map), 3, 39, 47, 158, 216, 217, 227
 - CAY Herbarium xvi, xviii
 - French Guiana, University of (UAG) 52
 - fries
 - recipes 201
 - frogs *see* poison frogs
 - fronds
 - inajá
 - uses 183, 185
 - frontiers 294, 295
 - frugivores xxii, 119, 286, 296
 - see also under species*
 - fruit
 - importance to wildlife xxiv, 14, 36, 45, 57, 76, 97, 109, 112, 115-16, 119, 125, 142, 148, 165, 172, 178, 181, 183, 186, 195, 202, 210, 224
 - uses for
 - açaí 161
 - açaí (solitary) 171
 - bacuri 43
 - Brazil nut 52
 - buriti 177, 180
 - cajá de jaboti 224
 - inajá 185
 - jatobá 94
 - patauá 193
 - piquiá 112
 - pupunha 199, 204
 - tucumã of Amazonas 209
 - uxi 142
 - fruit bracts, uses for
 - inajá 185
 - fruit sales 250-1
 - from one hectare 143, 150
 - fruit seasons *see* flower and fruit seasons
 - fruit stalks, uses for
 - açaí 161
 - inajá 185
 - patauá 193
 - Frutas Comestíveis da Amazônia* 149, 287
 - Frutíferas e Plantas Úteis na Vida Amazônica* 18
 - updated English version ix
 - FSC *see* Forest Stewardship Council
 - fuels 177, 185, 272
 - biofuels 71, 74, 94, 297
 - see also* lamp oil
 - Fundação Floresta Tropical (FFT) xv, xvi, xvii
 - Fundação de Tecnologia do Estado do Acre (FUNTAC) 93
 - fungus aflatoxins 51
 - fungi
 - (*Cordyceps* spp.) 138
 - (*mal-das-folhas*) 126, 127, 128
 - FUNTAC *see* Fundação de Tecnologia do Estado do Acre
 - furniture 43, 68, 99, 100, 105, 129, 131, 132, 133, 136-7, 199, 260-1
 - furniture-making
 - cost-benefit comparisons with timber sales 261
- ## G
- gachipaes *see* pupunha
 - Gaia, Gloria xv, xvi, xix, 33, 34, 88, 147, 267
 - Gaia, Pedro 277
 - Galuppo, Silvia xvi, 87
 - Galvão, Jurandir xiv, xvi, 109, 185
 - game 14, 76
 - cost/benefit comparison with buying meat 117, 187-9
 - see also* hunting
 - gameleira (*Ficus dendrocida*) 123, 306
 - ganzá xxii
 - Garcinia*
 - G. [Rheedia] brasiliensis* (bacuripari liso) 47, 216, 305
 - G. [R.] gardneriana* (bacuri mirim) 47
 - G. [R.] macrophylla* (bacuri; bacuripari) 47, 259
 - G. madruno* (bacuri de espinho) 47

- gardens 97, 189, 198, 207
see also 'floodplain gardens'
- garlic 53
- gates 112
- gato do mato (jaguaritirica; ocelot; *Leopardus pardalis*) 97, 311
- gavião real (harpy eagle; *Harpia harpyja*) 97, 314
- gender differences
 vine harvesting 137
- generations
 future human v, viii, 6
 tree 37-8, 58, 90, 106
- genetic incompatibility 46
- Geochelone* 76, 181, 221, 224, 258
G. carbonaria (jabuti; jabuti carumbé; jabuti-do-pé-vermelho; red-footed tortoise) 315
G. denticulata (Brazilian giant tortoise; forest tortoise; jabuti branco; jabuti-carumbé; jabuti-do-pé-amarelo; South American yellow-footed tortoise) 115, 316
- Geotrygon* spp. (juriti; pariri; quail-dove) 259, 313
- Germany
 imports
 copaíba oil 73
- germination 15
 açai 165
 açai (solitary) 173
 andiroba 37
 bacuri 45, 46
 Brazil nut 58, 59
 buriti 182
 cat's claw 70
 copaíba 77
 inajá 189
 ipê-roxo 89
 jatobá 98
 mahogany 103, 107-8
 patauá 196
 piquiá 118
 pupunha 203
 rubber tree 127
 titica 134
 tucumã of Amazonas 211
 uxi 149
- Glória, Dona (from Cametá) 35
- glossary xxi-iii
- Goeldi Museum *see* Museu Paraense Emílio Goeldi
- golden-winged parakeet (periquito de asa dourada; periquito de asa vermelha; *Brotogeris chrysoptera*) 45, 46, 313
- Gomes, Rubens xvii, 273
- Gomes, Valério xvi, 78
- Gomes-Silva, Daisy Aparecida Pereira xv, xix, 191
- Gonzaga, Luiz 278
- Goupia glabra* (cupiúba) 259
- governments
 and community forest management initiatives 165
 and settlement policies 287
- Graca (from Capim Community) xvii
- graviola (soursop; *Annona muricata*) 258, 306
- Graziano da Silva, José Francisco ix
- great fruit-eating bat (morcego de cara listrada; *Artibeus lituratus*) 151, 309
- green gold (wood) *see* Brazil nut tree *and* mahogany
- green mahogany *see* ipê-roxo
- 'green seal' products 53, 251
- grey brocket deer (veado branco; *Mazama gouazoubira*) 119, 172, 181, 311
- Grogan, James xiv, xix, 101
- growth 297
see also regrowth of bark
- growth (circumference)
 bacuri 39
 copaíba 71
 jatobá 91
 piquiá 109
 uxi 139
- growth (diameter) 91
 açai 158
 ameixa 218
 andiroba 38
 bacuri 39
 Brazil nut 58, 59, 62
 buriti 175
 cat's claw 68, 70
 copaíba 71, 77
 inajá 183
 ipê-roxo 81, 89, 90
 piquiá 109
 pupunha 197
 uxi 139
see also dbh (diameter at breast height)
- growth (height) 15
 abiorana 217
 açai 158, 165
 açai (solitary) 169, 173
 ameixa 218
 andiroba 29, 37
 apuruí 219
 araca 218
 ata brava 220
 azeitona 218
 bacuri 39, 45, 47
 biribá 220
 Brazil nut 58

- buriti 175, 182
 cacao 223
 cajá 224
 copaíba 71, 77
 envira caju 226
 inajá 183, 189
 ipê-roxo 81, 89
 jatobá 91, 98
 mahogany 101, 107, 108
 murumuru 213
 pariri 217
 patauí 191, 196
 piquiá 109, 118
 pupunha 197, 203, 204
 rubber tree 127
 sapota 228
 tucumã of Amazonas 211
 uxi 139, 149
 growth (length)
 cat's claw 66, 68, 70
 titica 134
 Grupo Curuperé xvi, xvii, 282
 GTZ xv, xvi, xix
Guadua weberbaueri (bamboo) 293
 Guajajara Indians 285
 Guamá, Pará State, Brazil 139
 Guamá river xxiv(map), 31, 237, 282
 guan (jacu; japassaro; *Penelope* spp.) 165, 181, 195, 202, 314
 guaraná (*Paullinia cupana*) 86, 165, 171, 307
 guariba (howler monkey; *Alouatta* spp.) 189, 309
 Guimãraes Rosa, João 283
 Gunn, Bee iv
 Gurupá, Pará State, Brazil 31, 37
 Gutemberg, Israel iv
 Guyana xxiv(map), 2(map), 3, 39, 47, 49, 65, 129, 130, 134, 158, 216, 227, 289

H
 hair 200
 hair treatments 171, 193, 199
 see also shampoos
 hammocks 178, 251
 handicrafts 52, 130, 142, 197
 adding value 133, 137, 261
 cost-benefit comparisons
 with timber sales 261
 with titica fibre sales 133, 137
 see also under items crafted, such as furniture;
 jewellery *and* toys
Harpia harpyja (gavião real; harpy eagle) 97, 314
 harpy eagle (gavião real; *Harpia harpyja*) 97, 314

 harvesting of forest products
 advice for
 açai 166
 açai (solitary) 173
 cat's claw 70
 copaíba oil 75, 76
 ipê-roxo bark (pau d'arco) 89
 jatobá bark 99
 titica vine 132, 134-5
 costs 17
 influence of moon phases 75, 138, 185
 seeds 21, 93, 103
 see also extraction *and* flower and fruit seasons
 hats 129, 178
 Health and Happiness Project, Santarém, Pará State viii
 health and safety cautions
 andiroba oil 32
 ayahuasco tea 270
 caustic soda 113
 chacrona 270
 foods incompatible with açai 164
 ipê-roxo (pau d'arco) 83
 jabube vine 270
 jutai bark 95
 piquiá fruit 112
 tripwires 148
 health benefits of forest products 4
 see also disease prevention *and* medicinal uses of
 forest products
 hectares xxi, xxii, 13, 243
 height of trees 246
 estimation 245
 see also growth (height)
 herbariums
 CAY Herbarium, French Guiana xvi, xviii
Herrania
 H. mariae (cacao jacaré; cacau jacaré) 222, 223, 306
 H. nitida (cacao jacaré; cacau jacaré) 223, 306
Heteropsis flexuosa (cipó titica; nibbi; titica) 129-38, 288, 289; 293, 294, 297, 303
Hevea brasiliensis (rubber tree; seringueira) viii, 11, 121-8, 166, 291, 293, 297, 303
 highways *see* roads and highways
Himatanthus sucuuba (sucuíba) 85, 86, 259, 308
 history
 Brazil nut cemeteries 60-1
 land rights activism 121, 124, 272, 285, 296
 rubber exploitation in Brazil 121, 126
 rubber plantations in Asia 126
 rubber tapper's diary 76

- ships of the Spanish Armada 105
 hitting trees 41
 H.J. Andrews Experimental Forest, Oregon, USA
 xiv, xx
 honey 180, 237
 honeycreeper, purple 45, 313
 houses *see* buildings
 howler monkey (guariba; *Alouatta* spp.) 189, 309
 Huánuco, Peru 2(map), 216, 224
 Humboldt, Alexander von 202
 hummingbirds 45
 hunting
 commercial 187
 subsistence 14, 57, 76, 94, 97, 109, 115-17, 119,
 134, 148, 165, 181, 186-9, 221, 224, 270, 282
 hunting implements 193
 arrows 91
 bows 83
 hybridization
 cajá 215, 224
 tucumã of Amazonas 212
 hydroelectric projects 60, 275, 276
Hymanaea
H. courbaril (jatobá) xxii, 5, 11, 85, 91-100, 285,
 303
H. oblongifolia (jutaí-da-folha-grande; long-
 leaved jutaí) 95, 307
H. parvifolia (jutaí) 95, 285, 307
- I**
 Iaçá (legend of) 163
 IAPs *see* Islands of High Productivity
 IBAMA *see* Instituto Brasileiro do Meio Ambiente
 e dos Recursos Natureis Renováveis
 ice creams 139, 141, 142, 161, 171, 177, 219, 222, 224
 ICRAF *see* World Agroforestry Centre
 ICRW *see* International Center for Research on
 Women
 IDRC *see* International Development Research
 Center
 IEPA *see* Instituto de Pesquisas Científicas e
 Tecnológicas do Estado do Amapá
 IFPA *see* Instituto Federal de Educação Ciência e
 Tecnologia do Pará
 igapó (permanently flooded forest) xxii, 47, 158
 Igarapé-açu, Pará State, Brazil 2(map)
 Igarapé Miri, Pará State, Brazil 20
 illegal logging 106, 162
 illumination 221
 IMAC-AC xvi
 AMAZON *see* Instituto do Homem e Meio
 Ambiente da Amazônia
 imbaúba (*Cecropia* spp.) 274, 307
 Imbiriba, Miguel iv
 inajá (cucurita; *Attalea maripa*) 142, 183-90, 286,
 288, 303
 inajá oil
 extraction 186
 income comparisons *see* cost-benefit comparisons
 income generation 286, 287
 for women 36, 137, 177, 251, 271
see also fruit sales; land sales *and* timber sales
 Indiana University (IU), USA xiv, xviii
 indigenous beliefs 141
see also folklore
 indigenous drinks 171, 202
 indigenous forest management 6, 15, 62, 110, 168,
 221, 294
see also community forest management
 indigenous languages
 Tupi-guarani 39
 indigenous peoples 29, 32, 83
 Apinayé 178, 179, 285
 Apurinã 208, 209, 287
 Chacobo Indians 286
 Cree 21
 Guajajara 285
 Iroquois 6
 Kayapó 165, 193, 294
 Maku 270
 Parakanã 21
 Tembé 88
 Tupinambá 178
 Waimiri Atroari 292
see also local people *and* traditional knowledge
 indigenous rituals 178, 270, 290
 Indonesia 122
Inga spp. (ingá) 3, 116, 226-7, 293, 307
I. alba (ingá vermelho) 227, 259
I. calantha 285
I. capitata 227
I. cayennensis 227
I. chartacea 227
I. cinnamomea 216, 227
I. edulis 227
I. grandis 227
I. ingoides 227
I. laurina 227
I. macrophylla 227
I. nobilis 216, 227
I. stipularis 227
I. velutina 227
 ingá vermelho (*Inga alba*) 227, 259
 inhambu (nambu; tinamou; *Crypturellus* spp.;
Tinamus spp.) 165, 259, 315
 inks 112

- INPA *see* Instituto Nacional de Pesquisas da Amazônia
- insect pests
 shoot borer moth caterpillars 108
- insect repellents 29, 32, 33, 34, 85, 94, 142, 161, 221
- insect-resistant wood 29, 74
- insects *see* bees *and* mosquitoes
- Institute of Man and the Environment *see* Instituto do Homem e Meio Ambiente da Amazônia
- Instituto Brasileiro do Meio Ambiente e dos Recursos Natureis Renováveis (IBAMA) 36, 162, 246
- Instituto Federal de Educação Ciência e Tecnologia do Pará (IFPA) xx
- Instituto do Homem e Meio Ambiente da Amazônia (IMAZON) iv, xiv, xvii, xviii
- Instituto Nacional de Pesquisas da Amazônia (INPA) xv, xvi, xviii, xx
- Instituto de Pesquisa Ambiental da Amazônia (IPAM) xvii
- Instituto de Pesquisas Científicas e Tecnológicas do Estado do Amapá (IEPA) xiv, xx, 36
- International Center for Research on Women (ICRW) iv
- International Development Research Center (IDRC) iv
- International Plant Genetic Resources Institute (IPGRI) xvi
- inventory, forest 8, 13, 78, 136, 176, 207, 216, 246, 260, 291, 296
- invisible benefits from forest products 4, 14, 43, 119, 143-4, 187-9, 238, 242, 267
see also air; fruit; game; medicinal plants; vines; water *and* wood
- IPAM *see* Instituto de Pesquisa Ambiental da Amazônia
- ipê-amarelo (*Tabebuia serratifolia*) 93, 307
- ipê-roxo (pau d'arco; *Tabebuia impetiginosa*) 2, 5, 11, 69, 81-90, 258, 291, 295, 303
- IPGRI *see* International Plant Genetic Resources Institute
- ipuruna flour 180
- Iquitos, Peru xxiv(map), 2(map), 177, 182, 216, 226, 228, 292, 293
- iron, dietary 9, 44, 54, 87, 146, 164
- Iroquois tribe 6
- Islands of High Productivity (IAPs) 128, 291
- IU *see* Indiana University
- IUCN Netherlands iv
- J**
- jabarana (tucumã of Amazonas; *Astrocaryum aculeatum*; *A. tucuma*) 142, 190, 205-13, 287, 288, 290, 295, 303
- jabuti (jabuti carumbé; jabuti-do-pé-vermelho; red-footed tortoise; *Geochelone carbonaria*) 315
- jabuti branco (Brazilian giant tortoise; forest tortoise; jabuti-carumbé; jabuti-do-pé-amarelo; South American yellow-footed tortoise; *Geochelone denticulata*) 115, 316
- jabuti carumbé *see* jabuti
- jabuti-carumbé *see* jabuti branco
- jabuti-do-pé-amarelo *see* jabuti branco
- jabuti-do-pé-vermelho *see* jabuti
- jacaicá (ameixa; ameixeira; *Antrocaryon amazonicum*) 218, 258, 305
- jacarandá da Bahia (Brazilian rosewood; *Dalbergia nigra*) 273, 307
- Jacaranda copaia* (paraparã) 259
- jaci (*Attalea butyracea*) 183, 190, 307
- jacu (guan; japassaro; *Penelope* spp.) 165, 181, 195, 202, 314
- jaguar (onça pintada; onça preta; *Panthera onca*) 76, 267, 270, 275, 311
- jaguaritica (gato do mato; ocelot; *Leopardus pardalis*) 97, 311
- jabube vine (ayahuasca; daime; *Banisteriopsis caapi*) 270, 285, 307
- jams 161, 199, 222, 251
- japassaro (guan; jacu; *Penelope* spp.) 165, 181, 195, 202, 314
- jarana (*Lecythis lurida*) 94, 259, 307
- Jardim, Mário Augusto xv, xvi, xix, 161
- Jari river xxiv(map), 225
- jatobá (*Hymanaea courbaril*) xxii, 5, 11, 85, 91-100, 285, 303
- Jaú National Park, Amazonas State, Brazil 130, 288
- Jessenia* spp. 285
- jewellery 123, 142, 161, 171, 177, 184, 193, 208, 209
- Johnson, Bettina Nicely iv
- José, Antonio xvii, 260
- juices
 açai 159, 160, 161, 169, 171, 172, 174
 ameixa 218
 apurui 219
 bacuri 44
 buriti 177
 cacau 222
 cajá 224
 pariri 217
 pataua 191, 193, 194
see also drinks
- jupati (*Raphia taedigera*) 307
- jupati seeds
 uses 142-3, 274
- jupindá (cat's claw; unha-de-gato; *Uncaria guianensis*; *U. tomentosa*) 65-70, 285, 289, 290, 292, 303
- juriti (pariri; quail-dove; *Geotrygon* spp.) 259, 313
- Juruá river xxiv(map), 225, 292

- jutaí (*Hymenaea parvifolia*) 95, 285, 307
 jutaí-da-folha-grande (long-leaved jutaí; *Hymenaea oblongifolia*) 95, 307
 jutaicica resin xxii, 85, 91, 92, 94, 147, 221
- K**
 Kageyama, Paulo Yoshio xiv, xix, 121
 Kainer, Karen xiv, xix, 49
 Katz, Daniel xiii
 Kayapó tribe 165, 193, 294
 Kew *see* Royal Botanic Gardens, Kew
 Kingo Oyama Homma, Alfredo xvi, xix, 60
 kites 178
- L**
 La Selva, Costa Rica 31
 Laboratório Sócio-Agronômico do Tocantins (LASAT) xvii
 Lacerda, Cristina xvi, 37
Laetia procera (pau jacaré) 259
 lamp oil 32, 74, 178
 land area
 measurement xxi, 13
 trees by *see* density
 land rights movements 121, 124, 272, 285, 296
 land sales 258, 277
 land titles, legalization of 265
 lapachol 81, 83
 Laranjal do Jari, Acre State, Brazil 53
 larvae, edible 193
 LASAT *see* Laboratório Sócio-Agronômico do Tocantins
 latex
 abiorana 217
 amapá 85, 87, 296
 extraction 88
 uses 260
 yields 88
 bacuri 39, 43, 44
 uses 43
 rubber tree
 extraction 127
 uses 122, 123
 yields 123
 sucuíba 85
 latex bowls 52, 124
 latex in cooking pans
 removal 44
 lauric acid 179
 laws
 forest protection 63, 77, 99, 106, 136, 162, 295
 rubber tapping subsidies 123
 Leão, Noemi Vianna Martins xvi, xix, 21
- leather
 buffalo 274
 ‘vegetable’ 123, 125
 leaves, uses for
 açai 161
 açai (solitary) 171
 buriti 178
 cat’s claw 68
 jatobá 94
 pataua 193
 tucumã of Amazonas 209
 see also fronds
Lecythis 259, 271, 274, 308
 L. lurida (jarana) 94, 259, 307
 L. usitata (sapucaia) 259
 legends 124, 138, 163, 267-9
 Leite, Arthur xiv, xix, 71
 length of vines *see* growth (length)
Leopardus pardalis (syn. *Felis pardalis*; gato do mato; jaguartirica; ocelot) 97, 311
 Lesser Antilles 227
 Levy, Dennis iv
 Lima, João 186
 Limão, Neusa do 146
 lipids, dietary 146, 164
 literacy 288, 294
 illiteracy rates 11
 teaching 19, 22
 livelihoods, subsistence 296
 see also invisible benefits from forest products
 ‘living dead’ (solitary) Brazil nut trees 1, 63
 lizards 94
 local organizations
 and community forest management initiatives 165
 local people 8
 sharing traditional knowledge with researchers
 ix, x, xiii, 1, 2, 12, 15, 33-5, 138, 161, 207
 see also indigenous peoples
 log removal 247
 loggers
 contracts with 247, 254, 295
 extraction authorizations 246
 negotiation with 43, 119, 237, 245-7
 payments for timber 236-7, 247, 248, 254
 Senhor Zé 237
 tree-planting by 21, 93
 logging 235, 241, 292, 297
 forest recovery after 5, 99, 242, 293
 illegal logging 106, 162
 number of species extracted 240
 predatory 99, 106, 117, 119, 173, 239
 threatened species 291, 295
 see also deforestation *and* timber extraction

- logging scouts *see* mateiros
Lonchophylla thomasi (Thomas's [long-tongued] nectar bat) 117, 311
 Londres, Marina xiv, xix, 29, 37
 long-haired spider monkey (coatá; macaco aranha; white-bellied spider monkey; *Ateles belzebuth*) 195, 309
 long-leaved jutaí (jutaí-da-folha-grande; *Hymenaea oblongifolia*) 95, 307
 long-nosed armadillo, nine-banded *see* nine-banded armadillo
 long-nosed armadillo, seven-banded *see* seven-banded armadillo
 long-tongued nectar bat, Thomas's *see* Thomas's nectar bat
 Lopes, Ricardo xvi, xix, 212
 louro prata (*Ocotea guianensis*) 259
 louro preto (*Ocotea fragrantissima*) 273, 307
 lowland tapir (anta; Brazilian tapir; *Tapirus terrestris*) 142, 148, 178, 181, 195, 312
Lueheopsis duckeana (açoita cavalo) 259
 Luiz Furtado, Edson xiv, xix, 121
 Lustosa, Antonio de Almeida 175, 180
 Luz, Lêda xvi, xix, 43, 85, 233
- M**
- macaco aranha (coatá; white-bellied [long-haired] spider monkey; *Ateles belzebuth*) 195, 309
 macaco prego (black-capped capuchin; brown capuchin; tufted capuchin; *Cebus apella*) 57, 165, 310
 Macapá, Amapá State, Brazil 2(map), 133, 142, 160
 maçaranduba (massaranduba; *Manilkara huberi*) 33, 93, 94, 244, 258, 307
 macaúba 288
 macaws 119, 141, 142, 148, 172, 189, 195, 210, 275, 313
 blue and yellow [gold] 181, 312
 red-bellied 181, 314
 MacDonald, Trilby iv
Maclura tinctoria (tatajuba) 21, 115, 308
 Madre de Dios, Peru 2(map), 50, 216, 226
 Madrid, Independent University of (UAM), Spain xvii
 magnesium, dietary 87, 146, 164
 Maguari river 282
 mahogany (mogno; *Swietenia macrophylla*) viii, 21, 60, 86, 99, 101-8, 271, 286, 289, 296, 297, 303
 mahogany, 'bastard' or 'false' *see* andiroba
 mahogany, green *see* ipê-roxo
 Maia, Conchita xvii, 271
 Maku Indians 270
mal-das-folhas 126, 127, 128
 Malaysia 122
 MAMA *see* Movimento Articulado de Mulheres da Amazonia
 management, forest *see* agroforestry management; community forest management *and* indigenous forest management
 management plans 19, 77, 136
 for açáí harvesting 263
 community forest reserves 260
 for copaibá oil extraction 285, 294
 mapping for 77, 78-9
 timber volume calculations for 246
 management of secondary forests 259
 Manaus, Amazonas State, Brazil xxiv(map), 2(map), 19, 30, 72, 73, 121, 199, 206, 207, 208, 209-10, 226, 273
 Amazon Theatre 126
 mango 164
 Mangueira's family 20, 143-4
Manihot esculenta (manioc) xxii, 45, 70, 128, 203
Manilkara huberi (maçaranduba; massaranduba) 33, 93, 94, 244, 258, 307
 manioc (*Manihot esculenta*) xxii, 45, 70, 128, 203
 manioc root xxiii, 52, 178, 195
 maparajuba (abiorana; abiu; *Pouteria* spp.) 3, 215, 217, 305
 Mapinguari xxii, 267, 269, 282
 mapping 19, 237, 291
 for management plans 77, 78-9
 over-complication of 207
 maps
 Amazonia xxiv, 2
 Brazilian states and places mentioned 2
 major rivers xxiv
 South America xxiv
 Mapuá, Pará State, Brazil 18
 Marabá, Pará State, Brazil 2(map), 60, 294
 maracanã do buriti (red-bellied macaw; *Orthopsittaca manilata*) 181, 314
 Marajó Island, Pará State, Brazil xxi, 2(map), 18, 32, 39, 40, 41, 139, 158, 159, 166, 263, 292
 Maranhão State, Brazil 2(map), 32, 39, 40, 158, 223, 271, 272
 São Luís 2(map), 41
 Marañón river xxiv(map)
 marapuama (*Ptychopetalum olacoides*) 86, 307
 Marcelo, Senhor 234
 Marcondes, Nívea xvi, 93
 Marechal Thaumaturgo, Acre State, Brazil 272
 Margarita Barbosa Women's Association 271
 Maria, Dona (from Belém) 165
 marianinha de cabeça amarela (white-bellied parrot; *Pionites leucogaster*) 45, 314

- Marita, Dona (from Santarém) 35
- market expenses 17, 18
- marketing timber 288, 295
- markets *see* FLORA Forest Products Market *and* Ver-o-Peso market
- markets, selling at
preparation for 68
- marmalades
recipes 44
- Maroca (from Capim Community) xvii
- Martins, Regina Célia xv
- marupá (*Simarouba amara*) 273, 307
- masato 202
- massaranduba (maçaranduba; *Manilkara huberi*) 33, 93, 94, 244, 258, 307
- mastruz (wormseed; *Chenopodium ambrosioides*) 86, 307
- matamatá 116
seeds 274
- mateiros xxii, 104
- mathematics teaching 22
- Matisia*
M. bicolor (sapota macho) 228, 308
M. cordata (sapota; sapota do Solimões) 228, 308
- Matita Pereira 267, 282
- Mato Grosso State, Brazil 2(map), 47, 199, 243
- mats 178, 209
- Mattos, Marli xvii, 245, 259, 162
- maturi 116
- Mauritia*
M. flexuosa (aguaje; buriti; moriche palm) 4, 175-82, 216, 283, 287, 293, 295, 303
M. vinifera 290
- Maximiliana* spp. *see* *Attalea*
- Mazama* 57, 76, 97, 112, 117, 141, 142, 148, 165, 178, 181, 186, 195, 202, 210, 275
M. americana (red brocket deer; veado capoeira; veado mateiro; veado pardo; veado vermelho) 115, 116, 119, 172, 181, 311
M. gouazoubira (grey brocket deer; veado branco) 119, 172, 181, 311
- McGrath, David xvii, xix, 260
- mealy parrot (papagaio moleiro; *Amazona farinosa*) 116, 312
- measurement
abbreviations xxiii
land area xxi, 13
pace length for mapping 78, 285
tree trunks xxii, 13, 245-6
- meat, buying
cost/benefit comparison with hunting game 117, 187-9
- 'meat of the plant kingdom' 4, 49, 54
- medicinal plants 259, 288, 292, 295
habitats 86
harvested for wood 5
loss 86, 296
see also under species
- medicinal uses of forest products [*see references within this section refer to 'medicinal uses of forest products' terms only*] 4
aging 53, 167
allergies 81, 83
Alzheimer's disease 53
anaemia 56, 83, 88, 171, 260
anxiety 49, 53
arteriosclerosis 83
arthritis 32, 83, 85, 142
asthma 193
bacterial infections 29, 32, 74
bites and stings
bat 36
insect 36
snake 36, 171
bladder infections 94
bleeding 163
blood diseases/disorders
anaemia 56, 83, 88, 171, 260
blood pressure 267
leukaemia 83, 164, 288
blood oxygenation 83
brain diseases/disorders
Alzheimer's disease 53
memory loss 53
Parkinson's disease 53
bronchitis 83, 91, 94
cancer 29, 32, 49, 53, 65, 81, 85, 88, 146, 157
leukaemia 83, 164, 288
prostate cancer 94
cholesterol reduction 142, 146
colds 85, 91, 94, 146
confidence levels 49, 53
cystitis 94
dengue fever 36
depression 53
dermatosis 74
diabetes 83, 142
diarrhoea 52, 91, 94, 260
earache 199
eczema 43
energy levels 49, 165
expectorants 85
eye function 200
night vision 179
eye infections 179
fatigue 53

- fevers 29, 32, 85
 dengue 36
- gastrointestinal diseases/disorders 56, 147
 diarrhoea 52, 91, 94, 260
 digestive problems 94
 gastritis 87, 88, 260
 stomach ache 94
 stomach inflammation 260
 worms 29, 32, 85, 88, 94, 161, 163, 260
- headaches 94
- hepatitis 56, 85
- herpes 43, 85
- immune system 49, 68
- inflammation 23, 29, 32, 65, 68, 71, 74, 81, 83, 85, 87, 157, 260
- joints
 arthritis 32, 83, 85, 142
 rheumatism 85, 142
- kidney disorders 171
- laxatives 193
- leukaemia 83, 164, 288
- liver diseases/disorders 171, 260
 hepatitis 56, 85
- lung diseases/disorders 85, 87, 88
 asthma 193
 bronchitis 83, 91, 94
 pulmonary congestion 94
 tuberculosis 88, 193
- malaria 69, 83, 88
- malnourishment 88, 179
- memory loss 53
- mood 49
- morning sickness 56
- mouth infections 179
- muscle cramps 94
- nervous system problems 85, 267
- night vision 179
- Parkinson's disease 53
- pregnancy and childbirth
 morning sickness 56
 tonic following 87
 umbilical cords 32
- psoriasis 74
- rehydration 213
- respiratory disorders *see* lung diseases/disorders
- rheumatism 85, 142
- scar tissue 32, 74, 81, 85, 87
- sinusitis 147
- skin diseases/disorders 142
 bites and stings 36, 171
 bruises 32
 cuts 163
 dehydration 179
 dermatosis 74
 eczema 43
 itchy skin 142
 psoriasis 74
 scar tissue 32, 74, 81, 85, 87
- sprains 29, 85
- stings *see* bites and stings
- stomach *see* gastrointestinal diseases/disorders
- swelling *see* inflammation
- throat diseases/disorders
 cough 83, 94, 146
 sore throat 32, 74, 199
- tonics 85, 87, 91, 163
- toothache 179
- tuberculosis 88, 193
- tumours *see* cancer
- ulcers 65, 85
- urinary tract diseases/disorders
 bladder infections 94
 cystitis 94
- uterine infections 85, 88
- viruses 65, 68
- weakness 94, 186
- worms 29, 32, 85, 88, 94, 161, 163, 260
- wound treatment 71, 85
- Medina, Gabriel iv, viii, xiv, xv, xvii, xix, 39, 233, 255, 270, 272
- Meireles, Domingos 118
- Melza M. and Frank T. Barr Foundation iv
- men *see* gender differences
- Mendes, Dona Ana xvii, 253
- Mendes, Chico 124, 278, 292
- methionine 54
- Mexico 91, 102, 227
- Middle Juruá, Amazonas State, Brazil 18
- midwives 271-2, 285
- Minas Gerais State, Brazil 2(map), 47, 199, 283
- minerals, dietary 4, 9, 44, 49, 53, 54, 87, 146, 164, 200, 286, 287
- mining 60, 62, 91
- Ministry of the Environment (MMA), Brazil xiii, xvii
 Forestry Department xviii
- miracle tree *see* copaíba
- Miranda, Elias Melo de xiv, xix, 65
- Mitu tuberosum* (mutum cavalo; mutum preto; razor-billed curassow) 97, 314
- MMA *see* Ministry of the Environment, Brazil
- Moções, Pará State, Brazil 162
- mogno (mahogany; *Swietenia macrophylla*) viii, 21, 60, 86, 99, 101-8, 271, 286, 289, 296, 297, 303
- mollusks, edible 178
- money, seeds as 123

- monkeys 76, 88, 94, 97, 119, 148, 158, 165, 181, 186, 189, 195, 210
 brown [black-capped; tufted] capuchin 57, 165, 310
 howler 189, 309
 white-bellied [long-haired] spider 195, 309
- moon phases
 influence on harvesting 75, 138, 185
- morcego de cara listrada (great fruit-eating bat; *Artibeus lituratus*) 151, 309
- moriche palm (ajuaie; buriti; *Mauritia* spp.) 4, 175-82, 216, 283, 287, 290, 293, 295, 303
- morototó (*Schefflera morototoni*) 273, 307
- Mosqueiro, Pará State, Brazil 2(map), 140
- mosquitos 29, 33, 36, 142
- Mota, Maria do Socorro xvi, 212
- Movimento Articulado de Mulheres da Amazonia (MAMA) viii, xvii
- mucajá (*Acrocomia aculeata*) 142, 307
- Müller, Hans xv
- multiple-use management 255-66, 287
- multipurpose species
 productivity 291
- mumbaca (*Astrocaryum gynacanthum*) 142, 307
- murici (*Byrsonima crassifolia*) 286
- Muritifest, Abaetetuba 177
- murumuru (*Astrocaryum murumuru*) 142, 213, 216, 257, 307
 seeds 274
- mururé (*Brosimum acutifolium*) 258, 282, 307
- Muruteuazinho, Pará State, Brazil 237
- Museu Paraense Emílio Goeldi, Belém (MPEG), Para State, Brazil xv, xvi, xviii, xx, 58, 163, 234, 291
- music
 carimbó xxi, 274, 281
see also songs
- musical instruments xxii
 made from
 seeds 274
 woods 105, 273
- mutum (curassow; mutum branco; mutum de penacho; *Crax* spp.) 97, 172, 195, 210, 313
- mutum branco *see* mutum
- mutum cavalo (mutum preto; razor-billed curassow; *Mitu tuberosum*) 97, 314
- mutum de penacho *see* mutum
- mutum preto *see* mutum cavalo
- Myrcia atramentifidera* (cumatê) 259
- Myrciaria dubia* (camu-camu) 216, 306
- mythical creatures xxi, xxii, 267-9, 282
- N**
- NAEA *see* Núcleo de Altos Estudos Amazônicos
- nails 131
- nambu (inhambu; tinamou; *Crypturellus* spp.; *Tinamus* spp.) 165, 259, 315
- Nanaí, Pará State, Brazil 113, 118, 147
- naphthoquinones 81, 83
- Nasua nasua* (coati, coatimundi; South American coati; quati; quatimundé) 112, 148, 181, 186, 281, 311
- National Agricultural Research Institute, Brazil *see* Empresa Brasileira de Pesquisa Agropecuária
- National Council of Extractive Populations (formerly National Council of Rubber Tappers) *see* Conselho Nacional dos Seringueiros
- nature spirits 270
- Nazaré, Pará State, Brazil 36, 146
- nectar bat, Thomas's *see* Thomas's [long-tongued] nectar bat
- negotiation with loggers 43, 119, 237, 245-7
- Negro river xxiv(map), 202, 270
- Nenzinho's family 146
- New York Botanical Garden (NYBG), USA xv, xvi, xvii, xviii, xx
- nine-banded [long-nosed] armadillo (tatu; tatu branco; tatu galinha; *Dasyops novemcinctus*) 115, 116, 310
- non-timber/non-wood forest products (NTFP/NWFP) 285
 certification 106, 262, 263, 293, 295, 296
 collection
see extraction *and* harvesting of forest products
 and community forest management 255, 266
 and conflicting forest uses 5, 119, 233-54, 289
 consumption in urban areas 2, 39, 167, 293
 definition of xxiii
 economics of
see adding value to forest products;
 economic value of forest products *and* profit on forest products
- fairs and festivals for 41, 125, 133, 159, 162, 175, 177, 202, 298
- FAO NWFPs Programme ix
- invisible benefits from 4, 14, 43, 119, 143-4, 187-9, 238, 242, 267
- markets for 41, 67, 73, 92, 111, 125, 133, 141, 157, 184, 193
- nutritional benefits of
see nutritional value of forest products
- perishability 17, 18, 171, 225, 250
- transport of 17, 250
- uses of
see medicinal uses of forest products;
 recipes; uses of forest product by tree parts *and* veterinary uses of forest products
see also under individual non-timber/non-wood forest products

- Nossa Senhora da Fátima, Brasília, Acre State, Brazil 103
- Nova Timboteua, Pará State, Brazil 2(map), 271
- NTFP/NWFP *see* non-timber/non-wood forest products
- Núcleo de Altos Estudos Amazônicos (NAEA) xiv, xvii
- nut milks
 recipes 54, 55
- nutritional benefits of forest products viii, 4
- nutritional value of forest products 14
- açai 164
- açai (solitary) 172
- amapá 87
- bacuri 44
- Brazil nuts 54, 287
- buriti 179
- inajá 186
- jatobá 95
- patauá 194
- piquiá 112
- pupunha 200
- tucumã of Amazonas 209
- uxi 146
- nuts, uses for
 Brazil nut 52, 274
- NWFP *see* non-timber/non-wood forest products
- NYBG *see* New York Botanical Garden
- O**
- ocelot (gato do mato; jaguartirica; *Leopardus pardalis*) 97, 311
- Ocotea*
O. fragrantissima (louro preto) 273, 307
- O. guianensis* (louro prata) 259
- Oeiras do Pará, Pará State, Brazil 2(map), 199, 208, 277
- OELA *see* Oficina Escola de Lutheria da Amazônia
- Oenocarpus* 285
- O. bacaba* (bacaba) 142, 194, 258, 305
- O. batana* (patauá) 191-6, 216, 289, 303
- O. b.* subsp. *batana* (ungurahua) 292
- Oficina Escola de Lutheria da Amazônia (OELA) xvii
- Oficinas Caboclas do Tapajós (Caboclo Workshops of the Tapajós) 260-1
- Ohashi, Selma Toyoko xvi, 21
- oil plants 294
- oil wood *see* copaíba
- oils
 açai 171
- andiroba 23, 29, 32, 33-5, 237, 294
- babassu 272
- bacuri 43
- Brazil nut 51, 52, 53
- buriti 178, 179, 180, 292
- cocão 225
- copaíba 71-6, 85, 285, 289, 290, 294
- dendê xxii, 179
- inajá 186
- patauá 191, 192, 193, 194, 195, 293
- piquiá 112, 113
- pupunha 199
- uxi 142, 146, 147
- oleic acid 146, 179
- Oliveira, Renaxon S. de xiv, 121
- Olívia, Maria xvi, 136
- onça pintada (jaguar; onça preta; *Panthera onca*) 76, 267, 270, 275, 311
- onça preta (jaguar; onça pintada; *Panthera onca*) 76, 267, 270, 275, 311
- Onças Island, Pará State, Brazil 159
- Onychopetalum*
O. krukovi (envira caju) 216, 306
- O. periquino* (envira caju) 226
- opera houses
 Amazon Theatre, Manaus 126
- opossums 186, 275, 281
- Orbignya* spp. *see* *Attalea*
- orchid composts 163
- Oregon State University (OSU), USA xiv
- organic certification 262
- Originais de Peixe-Bois 281
- Ormosia* spp. (tento) 142, 308
- Ortalis* spp. (aracuã; chachalaca) 165, 181, 275, 314
- Orthopsittaca manilata* (maracanã do buriti; red-bellied macaw) 181, 314
- OSU *see* Oregon State University
- Overbrook Foundation iv
- owls 275
- P**
- paca (*Agouti paca*) 36, 76, 94, 97, 112, 115, 116, 117, 119, 141, 142, 148, 181, 186, 189, 210, 212, 221, 259, 275, 309
- pace length for mapping 78, 285
- packaging 250
- pacu, black-finned (tambaqui) 125, 261, 316
- paints
 body 29, 32
- industrial 74
- pale-throated three-toed sloth (preguiça bento; *Bradypus tridactylus*) 309
- palm heart industry 292, 294
- over-exploitation of solitary açai 162, 169, 173, 263
- palm hearts xxi
- açai
 extraction affects fruit yield 166

- numbers per can 162
- uses 161, 163
- yield 160
- açaí (solitary)
 - over-exploitation 162, 169, 173, 263
 - uses 171
- inajá
 - uses 185
- patauí
 - uses 193
- pupunha 197, 199, 200, 203
 - uses 199
 - sustainable harvesting 298
- palm tanager (saí açu pardo; sanhaçu do coqueiro; *Thraupis palmarum*) 45, 315
- palm trees 285, 291
 - fire survival 183, 190, 205
 - see also açai; babaçu; bacaba; buriti; cocão; coconut; dendê; inajá; jaci; jupati; mucajá; mumbaca; murumuru; patauí; piaçava; pupunha; pupunha brava; tucumã of Amazonas; tucumã do Pará and tucumã-í
- palm trunks, uses for
 - açaí 161
 - açaí (solitary) 171
 - buriti 175, 178, 180
 - patauí 193
 - pupunha 203
 - tucumã of Amazonas 206
- palmeira de pêssego see pupunha
- palmera de melacotón see pupunha
- palmito see palm hearts
- Panama 102
- pancake fillings 209, 210
- Pando, Bolivia 2(map), 216, 224
- panelling 105
- Panthera onca* (jaguar; onça pintada; onça preta) 76, 267, 270, 275, 311
- Pantoja, José Maria xvii, 253
- Pantoja, M. xvii, 257
- Panzer, Carla xvii, 268
- papagaio moleiro (mealy parrot; *Amazona farinosa*) 116, 312
- Papua New Guinea 180
- Pará, Federal University of (UFPA), Brazil xiv, xvi, 33, 52, 95
- Pará river 139
- Pará State, Brazil 2(map), 3, 21, 30, 32, 39, 42-3, 47, 49, 50, 69, 72, 75, 92, 97, 99, 102, 110, 130, 131, 132, 133, 163, 164, 169, 191, 192, 205, 216, 218, 223, 227, 259, 272, 274, 276, 289, 295
 - Abaetetuba 2(map), 162, 177
 - Acará 2(map), 141, 149, 150, 159
 - Alto Rio Guama 31, 294
 - Ananim 234
 - Baixo Tocantins 236, 237
 - Belém xxi, xxiv(map), 2(map), 32, 40, 41, 43, 51, 67, 73, 74, 83, 86, 88, 104, 121, 131, 139, 140, 142-3, 149, 150, 159-60, 165, 176, 185, 199, 226, 228, 295, 296
 - Bosque Rodrigues Alves 23
 - Benjamin Constant 260, 294
 - Boa Vista 110, 140
 - Boim 126
 - Bragança 2(map), 41, 178, 186, 260
 - Bragantina 40, 45, 139
 - Breves 2(map), 139
 - Cameté 2(map), 32, 34, 35, 162
 - Capanema 2(map), 186
 - Capim river area 42-3, 73, 76, 97, 110-11, 115, 117, 139, 141, 143, 144, 146, 148, 187-9, 238-44, 247, 253, 291
 - Carajás 60-1, 91, 294
 - Caxuanã National Forest 50
 - Guamá 139
 - Gurupá 31, 37
 - Igarapé-açu 2(map)
 - Igarapé Miri 20
 - Mapuá 18
 - Marabá 2(map), 60, 294
 - Marajó Island xxi, 2(map), 18, 32, 39, 40, 41, 139, 158, 159, 166, 263, 292
 - Moções 162
 - Mosqueiro 2(map), 140
 - Muruteuzinho 237
 - Nanaí 113, 118, 147
 - Nazaré 36, 146
 - Nova Timboteua 2(map), 271
 - Oeiras do Pará 2(map), 199, 208, 277
 - Onças Island 159
 - Paragominas 2(map), 17-18, 73, 111, 117, 143, 145, 238, 244, 297
 - Pedreira 2(map), 31, 33, 36, 72
 - Peixe-Boi 1, 234
 - Ponta de Pedras 2(map), 41, 159, 162
 - Porto de Moz 2(map), 130, 135, 136-7, 138
 - Quiandeua 2(map)
 - Salgado region 39
 - Salvaterra 2(map), 32
 - Santarém viii, 2(map), 31, 35, 126, 269
 - São Domingo 36
 - Soure 41
 - Tapajós 122-3, 127
 - Tapajós National Forest 36, 288, 298
 - Taquandeua 45
 - Tauaú 45

- Temb  88, 130, 221
 Tom -A u 2(map), 73, 83, 244
 Transcemet  118
 Tucuru  60
 Viseu 140
 Paragominas, Par  State, Brazil 2(map), 17-18, 73, 111, 117, 143, 145, 238, 244, 297
 Paraguay xxi, xxiv(map), 2(map), 47, 65, 91, 218
Parahancornia
P. amapa *see P. fasciculata*
P. fasciculata (syn. *P. amapa*; amap  amargo; bitter amap ) 85, 87, 88, 260, 295, 296, 305
 Para so, Jos  269
 Parakan  tribe 21
 parakeet
 golden-winged 45, 46, 313
 white-eyed 45, 313
 Parana river xxiv(map)
 Parana State, Brazil
 Paranagu  2(map), 104, 199
 Paranagu , Parana State, Brazil 2(map), 104
 parapar  (*Jacaranda copaia*) 259
 Paraponera spp. (tucandeira ant) 138
 paricazinho (*Stryphnodendron guianense*) 259
 pariri
 (juriti; quail-dove; *Geotrygon* spp.) 259, 313
 (*Pouteria pariry*) 217, 307
 parrots 119, 141, 172, 181, 189, 195, 202, 210, 286
 mealy 116, 312
 white-bellied 45, 314
 pastures *see* fields and pastures
 patau  (*Oenocarpus bataua*) 191-6, 216, 289, 303
 patau  oil 191, 193, 293
 calorific value 194
 extraction 192, 195
 uses 193
 pau d'arco (ip -roxo; *Tabebuia impetiginosa*) 2, 5, 11, 69, 81-90, 258, 291, 295, 303
 pau jacar  (*Laetia procera*) 259
 pau-rainha (*Brosimum rubescens*) 273, 307
 pau-rosa (*Aniba rosaeodora*) 117
 Pauini, Amazonas State, Brazil 272
 Paula Fernandes, N via Maria de xv, xx, 175
Paullinia cupana (guaran ) 86, 165, 171, 307
 Paulo, Jos  258
 payments for timber 236-7, 247, 248, 254
 peach palm (pupunha; *Bactris gasipaes*) 150, 197-204, 271, 287, 292, 298, 303
 peccaries 57, 76, 125, 142, 165, 178, 181, 186, 195, 210, 221, 224, 225, 261
 collared 116, 119, 148, 181, 189, 312
 white-lipped 97, 119, 148, 181, 195, 312
 Pedreira, Par  State, Brazil 2(map), 31, 33, 36, 72
 Peixe-Boi, Par  State, Brazil 1, 234
 pejibaye *see* pupunha
Penelope spp. (guan; jacu; japassaro) 165, 181, 195, 202, 314
 People and Plants International (PPI) iv, xiv, xv, xvi
 Pereira, Luciano xiv, xx, 129
 perfumes 117
 industrial 74
 periquit o maracan  (white-eyed conure; white-eyed parakeet; *Aratinga leucophthalma*) 45, 313
 periquito de asa dourada (golden-winged parakeet; periquito de asa vermelha; *Brotogeris chrysoptera*) 45, 46, 313
 periquito de asa vermelha (golden-winged parakeet; periquito de asa dourada; *Brotogeris chrysoptera*) 45, 46, 313
 perishability of forest products 17, 18, 171, 225, 250
 Peru xxiv(map), 2(map), 3, 47, 49, 63, 65, 66, 67, 69, 102, 122, 129, 171, 181, 191, 193, 197, 202, 205, 217, 218, 220, 225, 227, 228, 270
 Alto Pur s 213
 Chino 188
 Hu nuco 2(map), 216, 224
 Iquitos xxiv(map), 2(map), 177, 182, 216, 226, 228, 292, 293
 Madre de Dios 2(map), 50, 216, 226
 San Martin 216
 Ucayali 2(map), 216, 224
 PESACRE xvii
 pests
 shoot borer moth caterpillars 108
 Peters, Charles xvii, xx, 260
 phosphorous, dietary 44 146, 164
 photographic chemicals 74
Phyllanthus niruri (quebra-pedra) 86, 308
 phytosterols 146
 pia ava (piassava; *Attalea funifera*) 257, 308
 piassava (pia ava; *Attalea funifera*) 257, 308
 Pia  State, Brazil 2(map), 39, 272
 Teresina 2(map), 41, 181
 pigs 186
 pijuayo *see* pupunha
 Pindorama Ranch, Amazonas State, Brazil 212
 Pinheiro, Luciana xvii, 271
Pionites leucogaster (marianinha de cabe a amarela; white-bellied parrot) 45, 314
 pipira (pipira de m scara; silver-beaked tanager; *Ramphocelus carbo*) 45, 315
 pipira de m scara (pipira; silver-beaked tanager; *Ramphocelus carbo*) 45, 315
 piqui  (*Caryocar villosum*) v, 5, 6, 9, 13, 18, 109-19, 143, 150, 236, 240-1, 244, 258, 275, 285, 289, 294, 303

- piquiá fruit
 consumption 5, 144, 239-40, 242
 piquiá oil
 extraction 113
 uses 112
 piranha negra (black piranha; *Serrasalmus niger*)
 125, 316
 piranhas
 black 125, 316
 red-eyed 316
 pirarucu 261
 Pires, Murça 58
 pivotal root 59
 plant diversity 3
 plantations 86
 planting trees *see* tree-planting
Platonia insignis (bacuri) 4, 17-18, 39-48, 119, 143,
 258, 259, 276, 286, 287, 288, 291, 296, 303
 Plowden, Campbell xiv, xvi, xx, 87, 88, 129
 poison frogs
 Amazonian 57, 286, 316
 Brazil-nut 57, 316
 Pollack, Harrison 162
 pollination 2, 4, 14, 291
 by bats 117
 by bees 57, 58, 63, 72
 by birds 45
 by weevils 198
 pollution 278
 Ponta de Pedras, Pará State, Brazil 2(map), 41, 159, 162
 population, human
 in Amazon basin 1
Poraquieba (umarí) 216, 308
 P. guianensis 216
 P. paraensis 216
 P. sericea 216
 porcão (queixada; white-lipped peccary; *Tayassu
 pecari*) 97, 119, 148, 181, 195, 312
 porco espinho (Brazilian porcupine, coendu;
 quando; *Coendou prehensilis*) 195, 281, 310
 porcupine, Brazilian 195, 281, 310
 porridge 161, 180, 272; (recipe) 96
 Porto de Moz, Pará State, Brazil 2(map), 130, 135,
 136-7, 138
 Porto Velho, Rôndonia State, Brazil xxiv(map),
 2(map), 208
 Portuguese terms xxi-iii
Portulaca pilosa (amor-crescido) 86, 305
 posters 16
 Postigo, A. xvii, 257
 potassium, dietary 54, 146, 164, 200
Pouteria (abiorana; abiu; maparajuba; pariri) 3, 215,
 217, 305
 P. caimito 217
 P. glomerata subsp. *glomerata* 217
 P. macrophylla 217
 P. pariry 217, 307
 powder
 uxi 141, 142
 PPI *see* People and Plants International
 Prance, Sir Ghilleen xiii
 preciosa (*Aniba canelilla*) 273, 308
 predatory logging 99, 106, 117, 173
 multi-tree damage 119, 239
 pregos de acapu 274
 preguiça bento (pale-throated three-toed sloth;
 Bradypus tridactylus) 309
 preguiça branca (brown-throated three-toed sloth;
 Bradypus variegatus) 116, 309
 preguiça real (southern two-toed sloth; *Choroepus
 didactylus*) 310
 preparations for market
 cat's claw 68
 Preto da Eva river 212
 prices
 research 250
 timber 295
 see also economic value of forest products
 primary forest 97, 130, 206, 217, 220, 237
 production, average diameter for
 amapá 87
 Brazil nut 58
 copaíba 77
 ipê-roxo 89
 mahogany 103, 104, 107
 rubber tree 127
 titica 132
 production, average time to 15
 açai 165
 açai (solitary) 173
 andiroba 37
 bacuri 45
 buriti 182
 cat's claw 70
 inajá 189
 ipê-roxo 89, 90
 jatobá 98
 patauá 192, 196
 piquiá 118
 pupunha 203
 rubber tree 127
 titica 134
 tucumã of Amazonas 207, 211
 uxi 149
 productivity 13, 291
 estimation methods 31

- fluctuations 30, 50, 92
of:
 açai 159, 160
 açai (solitary) 171
 amapá 88
 andiroba 30-1, 35
 bacuri 40-1, 144
 Brazil nut 50-1, 290, 297
 buriti 176
 cat's claw 66
 copaíba 72
 inajá 184
 ipê-roxo 82
 jatobá 92, 93
 mahogany 103
 patauá 192
 piquiá 110-11, 144
 pupunha 198-9
 rubber tree 123
 titica 131, 136
 tucumã of Amazonas 206-7
 uxi 140-1, 144
variations between same-species trees 51, 72, 92, 111, 140, 250, 290
- profit on forest products 17, 18
 timber 243
 see also adding value to forest products *and* cost-benefit comparisons
- profit-sharing 262
- Projeto Capoeira xvii
- Projeto Dendrogene xvi, xx, 117, 290
- Projeto IPGRI xvi
- propagation advice
 bacuri 46
 Brazil nut 59
 buriti 182
 ipê-roxo 89
 jatobá 98
 mahogany 107
 pupunha 203
 tucumã of Amazonas 211
- protection *see* forest protection
- protein, dietary 44, 49, 95, 112, 117, 146, 164, 178, 179, 186, 194, 200, 209, 289
- protein, vegetable *see* Brazil nuts
- Protium* spp. (breu; breu branco) 33, 147, 221, 273, 305
- proverbs and sayings
 monkey and gourd 57
 seven generations 6
 you cannot eat money 21
- Psychotria viridis* (chacrona) 270, 306
- Pteroglossus* spp. (aracari; araçari) 195, 314
- Ptychopetalum olacoides* (marapuama) 86, 307
- publications, scientific 15, 285-98
- pulp
 bacuri 41
 buriti 177, 179, 180, 181
 cacau 222
 pupunha 204
- Puntodewo, Atie iv, xvii, 257
- pupunha (peach palm; *Bactris gasipaes*) 150, 197-204, 271, 287, 292, 298, 303
- pupunha brava (chica-chica; wild pupunha; *Aiphanes aculeata*) 204, 308
- pupunha oil
 uses 199
- purées
 recipes 201
- purple honeycreeper (saí de perna amarela; saí púrpura; *Cyanerpes caeruleus*) 45, 313
- purses 178
- puruí (*Alibertia* spp.) 219, 308
- puruí grande (*Alibertia* spp.) 219, 308
- Purus river xxiv(map), 216, 288
- Putumayo river xxiv(map)
- Putz, Francis E. xvii, xx, 248
- Q**
- quail-dove (juriti; pariri; *Geotrygon* spp.) 259, 313
- quality seals 53, 251
- quando (Brazilian porcupine; coendu, porco espinho; *Coendou prehensilis*) 195, 281, 310
- quati (coati, coatimundi; quatumundé; South American coati; *Nasua nasua*) 112, 148, 181, 186, 281, 311
- quatumundé (coati, coatimundi; quati; South American coati; *Nasua nasua*) 112, 148, 181, 186, 281, 311
- quatipuru (esquilo; squirrel; *Sciurus* spp.) 36, 57, 76, 141, 142, 148, 186, 210, 312
- quebra-pedra (*Phyllanthus niruri*) 86, 308
- Queen Piquiá 110
- queixada (porcão; white-lipped peccary; *Tayassu pecari*) 97, 119, 148, 181, 195, 312
- Quiandeua, Pará State, Brazil 2(map)
- R**
- raceme xxiii
- radio programmes 16
- Rai, Negro 282
- Rainforest Alliance iv
- Ramos, Carlos Augusto xvi, 37
- Ramphastos tucanus* (Cuvier's toucan; tucano grande de papo branco; white-throated toucan) 195, 315
- Ramphocelus carbo* (pipira; pipira de máscara; silver-beaked tanager) 45, 315

- Raphia taedigera* (jupati) 307
rats 59, 108
razor-billed curassow (mutum cavalo; mutum preto; *Mitu tuberosum*) 97, 314
Reca Project 58
recipes 14
 biscuits 54
 bread 96
 cakes 55, 195, 201
 chicken dishes 55
 crèmes 44, 146, 181
 drinks and juices 44, 186, 194
 flour 96
 fries 201
 marmalades 44
 medicinal teas 69, 83-4, 94
 nut milks 54, 55
 porridge 96
 purées 201
 soaps 36, 113, 147
 sweets 56, 147, 181
recipes using
 andiroba 36
 bacuri 44
 Brazil nuts 54-6
 buriti 180-1
 cat's claw 69
 inajá 186
 ipê-roxo (pau d'arco) 83-4
 jatobá 94, 96
 patauá 194, 293
 piquiá 113
 pupunha 201, 290
 uxi 146-7
recovery, forest
 after logging 5, 242, 293
red-bellied macaw (maracanã do buriti; *Orthopsittaca manilata*) 181, 314
red brocket deer (veado capoeira; veado mateiro; veado pardo; veado vermelho; *Mazama americana*) 115, 116, 119, 172, 181, 311
red-eyed piranha (*serrasalmus rhombeus*) 316
red-footed tortoise (jabuti; jabuti carumbé; jabuti-do-pé-vermelho; *Geochelone carbonaria*) 315
Redfern, Chrissi iv, xiii
reforestation
 seed harvesting for 21, 93
 see also tree-planting
regeneration, natural 297
 after fires 40, 117, 130, 190, 206, 211, 234
 after hurricane damage 102
 after logging 99
 after swidden agriculture 45, 58, 234, 259, 287
 degraded land 39, 226
 difficulties 1-2, 99
 and seed predation 59, 98, 108, 195
 see also pollination; regrowth of bark and seed dispersal
Regia, Mara 16
regional differences
 flowering and fruiting seasons 13
Régis da Costa, Joanne xv, xx, 205
regrowth of bark
 ipê-roxo (pau d'arco) 84, 99
 jatobá 99
religious sects 270
'remedy of the saints' 33
remedies see medicinal uses of forest products and teas: medicinal
replanting
 secondary forest 258, 295
reproductive age, trees of 37-8
researchers
 sharing scientific results with local people ix, x, xiii, 1, 2, 11, 15, 138
reserves, forest see community forest reserves and Extractive Reserves
RESEX see Extractive Reserves
resins
 jatobá 94
 jutaicica xxii, 85, 91, 92, 94, 147, 221
respect for women 36
Revilla, Mariella Mendes xiv, xvi, xx, 81, 99
Rheedia brasiliensis see *Garcinia brasiliensis*
 R. gardneriana see *Garcinia gardneriana*
 R. macrophylla see *Garcinia macrophylla*
Rigamonte-Azevedo, Onofra Cleuza xiv, xx, 71, 175
rind, uses for
 bacuri 44
 piquiá 112
Rio Branco, Acre State, Brazil 2(map), 51, 74, 92, 93, 131, 133, 171, 172, 173, 193, 208
Rio Grande do Sul State, Brazil
 Dois Irmãos 172
Rio de Janeiro, Federal University of (UFRJ), Brazil 179
Rio de Janeiro State, Brazil 2(map), 199
 Rio de Janeiro (city) xxiv(map), 133, 165, 177
Rios, Montserrat xvii, xx, 260
Rita, Dona (from Santarém) 35
river margins 66, 72, 97, 175, 192, 213, 217, 225, 227
rivers xxiv(map)
 see also under named rivers
roads and highways 60, 63, 66, 77, 78, 86, 233, 247
roçados de várzea (floodplain gardens) 168
Rodrigues Alves Park, Belém see Bosque Rodrigues Alves

- Rojas-Briales, Eduardo ix
 role-playing 16
Rollinia spp. (ata brava; biribá; biribá brava) 150, 215, 216, 220, 287, 291, 305
R. calcarata 216, 220, 305
R. mammifera 216, 305
R. mucosa 220
R. peruviana 220
 Rondônia State, Brazil 2(map), 58, 179, 191, 205
 Ariquemes Reserve 21
 Porto Velho xxiv(map), 2(map), 208
 roofing 171, 183, 185
 shingles 32, 42, 43, 258
 roots
 deep 59
 uses for
 açáí 161
 açáí (solitary) 171
 cat's claw 68
 titica 129, 131, 134
 ropes 161
 Roraima State, Brazil 2(map), 21, 205, 218
 rosewood, Brazilian *see* Brazilian rosewood
 rot-resistant wood 81, 112
 Roxinho, Senhor (from Acará) xvi, 149, 150
 Royal Botanic Gardens, Kew, UK 126
 rubber erasers 280
 rubber industry 121, 122, 257
 rubber latex 23, 122, 123, 127
 rubber plantations, colonial 126
 rubber smoking 95, 123, 185, 209, 225
 rubber tappers 18, 76, 121, 172, 280, 288, 298
 Brazil nut harvesting 123
 copaíba extraction 73, 76, 77
 forest protection 124
 roads 77, 78
 subsidies 123
see also Mendes, Chico
 rubber tapping 87, 124
 season 122
see also extraction, latex
 rubber tree (seringueira; *Hevea brasiliensis*) viii, 11, 121-8, 166, 291, 293, 297, 303
 Ruiz, M. xvii, 257
 Ruiz, Rocio xvi, 93
- S**
 Sabogal, Cesar xvii, 259
 sacaca (*Croton cajucara*) 86, 308
 Saci 267, 282
Sacoglottis spp. (uxirana) 142, 274, 308
 saddlebags 129, 131
 saí açu pardo (palm tanager; sanhaçu do coqueiro; *Thraupis palmarum*) 45, 315
 saí de perna amarela (purple honeycreeper; saí púrpura; *Cyanerpes caeruleus*) 45, 313
 saí púrpura (purple honeycreeper; saí de perna amarela; *Cyanerpes caeruleus*) 45, 313
 sales *see* fruit sales; income generation; land sales *and* timber sales
 Salgado region, Pará State, Brazil 39
 Salomão, Rafael P. xv, xvi, xx, 62
 salt
 substitutes 178
 supplements 193
 Salvaterra, Pará State, Brazil 2(map), 32
 San Martiperu 216
 sandals 178, 280
 sandwiches, tucumã 208, 209-10
 sangre-de-grado (*Croton lechleri*) 69, 308
 sanhaçu da amazônia (blue-grey tanager; *Thraupis episcopus*) 45, 315
 sanhaçu do coqueiro (palm tanager; saí açu pardo; *Thraupis palmarum*) 45, 315
 Santa Cruz de la Sierra, Bolivia 2(map), 47
 Santarém, Pará State, Brazil viii, 2(map), 31, 35, 126, 269
 Santo Daime 270
 São Domingo, Pará State, Brazil 36
 São João do Jaburu community, Gurupá, Pará State, Brazil 37
 São Luís, Maranhão State, Brazil 2(map), 41
 São Luiz do Remanso, Acre State, Brazil 172, 287
 São Paulo State, Brazil 2(map), 32, 73, 199
 São Paulo (city) xxiv(map), 133, 143, 177
 São Paulo State University (UNESP), Brazil xiv, xix
 sap, uses for
 buriti 180
see also latex *and* resins
 sapota (sapota do Solimões (*Matisia cordata*) 228, 308
 sapota macho (*Matisia bicolor*) 228, 308
 sapota do Solimões (sapota; *Matisia cordata*) 228, 308
 Sapotaceae 293
 sapucaia (*Lecythis* spp.) 259, 271, 274, 308
 sauces, spicy pepper 224
 savannah regions *see* cerrado
Schefflera morototoni (morototó) 273, 307
 Schroth, Götz xv, xvi, 127, 212
 Schulze, Mark xiv, xx, 81, 91
 scientific research
 shared with local people x, xiii, 1, 2, 11, 15, 138
Sciurus spp. (esquilo; quatipuru; squirrel) 36, 57, 76, 141, 142, 148, 186, 210, 312

- secondary forest 45, 47, 58, 66, 68, 86, 97, 118, 183, 188, 189, 205, 206, 207, 212, 217, 220, 223, 226, 227, 234, 237, 296
 benefits of plants from 260, 294
 management for fruit yield 259
 replanting 258, 295
see also capoeira
- Secretariat of Forests and Extractivism (Sefe) xiv, xvi, 75
- security and diversity 266
- Sede de Investigación Universitaria (SIU) xvii, xx
- seed dispersal xxii, 4, 14, 36, 57, 97, 119, 122, 158, 186, 189, 210, 298
 by bats 151
 by birds 158, 172
 by humans 158, 165, 189, 195
 by water 122, 158, 165
- seed dormancy, breaking *see* germination
- seed harvesting
 mahogany 103
 for reforestation 21, 93
- Seed Network of Amazonia 21
- seed predation
 and natural regeneration 59, 98, 108, 195
- seedlings 288, 290, 291
 propagation 46, 59, 89, 98, 107, 182, 203, 211
- seeds
 fungal attacks 126, 127
 uses for 21, 123, 274
 açai 142, 143, 161, 163
 açai (solitary) 171
 andiroba 29, 32, 294
 bacuri 40
 buiuçu 274
 buriti 177, 179
 cacau 222
 castanha de porco 225
 inajá 184, 274
 jatobá 274
 jupati 274
 matamatá 274
 murumuru 274
 patauá 193
 piquiá 112
 rubber tree 123, 274
 tucumã of Amazonas 208, 209, 274
 uxi 142-3
- Sefe *see* Secretariat of Forests and Extractivism
- selenium 49, 53, 200, 286, 287
- SEMEIA- Rio Branco xiv, xv
- Sena Madureira, Acre State, Brazil 272
- Senador Guiomard, Acre State, Brazil 173
- Senhorinha of Nanai 147
- SEPLAN, Acre xv
- seringueira (rubber tree; *Hevea brasiliensis*) viii, 11, 121-8, 166, 291, 293, 297, 303
- Serra Silva, Murilo da xv, xvi, xx, 23, 87, 233, 255
- Serrasalmus*
S. niger (black piranha; piranha negra) 125, 316
S. rhombeus (red-eyed piranha) 316
- Serviço Cerne xiv, xv, xvii
- settlement policies 287
- seven-banded [long-nosed] armadillo (tatu pretinho; tatuí; *Dasypus septemcinctus*) 115, 310
- shampoos 56, 74, 179
- Shanley, Patricia iv, viii, xiv, xv, xvi, xx, 29, 39, 43, 85, 91, 109, 139, 233, 267
- sharing
 forest fruits with wildlife 148, 210
 scientific research and traditional knowledge ix, x, xiii, 1, 2, 11, 12, 15, 33-5, 138, 161, 207
- shifting cultivation *see* swidden agriculture
- ships, historical 105
- shipworms 178
- shoes 123
- shoot borer moth caterpillars 108
- sieves xxiii, 34, 178, 195
- silicon, dietary 164
- Silva, Antônio Valente da iv
- Silva, João Batista da 163
- Silva, Lígia Constantina da xvii, 271
- Silva, Marina viii, xiii
- Silva, Natalino xv, xvii, xx, 246
- silver-beaked tanager (pipira; pipira de máscara; *Ramphocelus carbo*) 45, 315
- Simarouba amara* (marupá) 273, 307
- single species logging *see* predatory logging
- Sisters of Bom Pastor xvii
- SIU *see* Sede de Investigación Universitaria
- size of fruit trees *see* growth (circumference); growth (diameter) *and* growth (height)
- slash and burn *see* swidden agriculture
- slingshot test 194
- sloths
 brown-throated three-toed 116, 309
 giant ground xxii, 269
 pale-throated three-toed 309
 southern two-toed 310
- Smith, Herbert H. 109
- snake, the great 267
- soaps 32, 34, 36, 43, 52, 73, 74, 112, 113, 143, 147, 178, 179, 185, 186, 213, 251, 257, 272
 recipes 36, 113, 147
- 'social species' 62
- sodium, dietary 146, 164
- soil fertility

- and legumes 226
- soils
- Amazonian dark earth (terra preta) 203
 - clay 72, 203
 - sandy 72, 91, 107, 183, 203
 - volcanic 203
- solidarity, community viii
- Solimões river 202
- solitary açai (*Euterpe precatoria*) viii, 169-74, 263, 287, 294, 303
- solitary Brazil nut trees ('living dead') 1, 63
- songs 16, 162
- Anthem of the rubber tappers 280
 - Ecological brega 276
 - Ecological logic 275
 - Ecological xote 278
 - The farmer sold his land 277
 - The great hinterland: paths 283
 - Hunting 282
 - Unafraid to be a woman 279
 - The vulture's carimbó 281
 - The way we are 282
- SOS Amazônia viii, xiv, xv, xvii, xx, 268
- soups 171
- Soure, Pará State, Brazil 41
- soursop (graviola; *Annona muricata*) 258, 306
- South America xxiv(map), 91
- South American coati (coati, coatimundi; quati; quatumundé; *Nasua nasua*) 112, 148, 181, 186, 281, 311
- South American yellow-footed tortoise (Brazilian giant tortoise; forest tortoise; jabuti branco; jabuti-carumbé; jabuti-do-pé-amarelo; *Geochelone denticulata*) 115, 316
- southern two-toed sloth (preguiça real; *Choroepus didactylus*) 310
- Souza, Benedito de xvii, 253
- soy industry 85, 292
- spathe xxiii, 161
- see also* fruit bracts
- species loss 20, 37-8
- spirits *see* evil spirits *and* nature spirits
- spiritual benefits of the forest 267
- spiritual values viii
- splinter-resistant wood 94, 105, 112
- Spondias* 215, 224
- S. dulcis* (cajarana) 224, 306
 - S. globosa* (cajá ; taperebá; taperibá) 224
 - S. mombin* (cajá) 224, 306
 - S. mombin* x *testudinis* (cajá-açu) 224, 306
 - S. testudinis* (cajarana; cajá de jaboti) 216, 224, 306
- Spruce, R. 49
- squirrels (esquilo; quatipuru; *Sciurus* spp.) 36, 57, 76, 141, 142, 148, 186, 210, 312
- stands of trees 50
- starch 197, 200, 225
- stems, uses for
- buriti 178
- stringrays 261
- storytelling 267, 296
- strainers 131
- street vendors
- açai juice 23, 172
 - buriti ice treats 177
- Strympl, Fábio iv
- Stryphnodendron*
- S. barbatiman* (barbatimão) 86, 305
 - S. guianense* (paricazinho) 259
- subject themes 299-302
- sucupira (*Bowdichia virgilioides*) 258, 308
- sucuúba (*Himatanthus sucuuba*) 85, 86, 259, 308
- sucuúba latex 85
- sugar 180
- 'sun oil' 34
- Sungkowo, Dadi iv
- sunscreen 179, 292
- super foods 164
- surgical gloves and masks 122, 123
- Suriname xxiv(map), 2(map), 39, 130, 217
- sustainable forestry viii, 297
- and* demand for certified forest products 106, 262, 263
- sustainable harvesting
- açai 263
 - Brazil nuts 293
 - palm hearts 298
- sweet amapá (amapá doce; *Brosimum parinarioides*) 87, 88, 289, 305
- sweets 161, 177, 179, 204, 222, 251
- recipes 56, 147, 181
- swidden agriculture xxiii, 165, 188, 189, 256
- regeneration after 1, 45, 58, 234, 259, 287
 - see also* fires
- Swietenia macrophylla* (mahogany; mogno) viii, 21, 60, 86, 99, 101-8, 271, 286, 289, 296, 297, 303
- swift, fork-tailed palm 181, 315
- Symphonia globulifera* (anani) 259
- T**
- Tabebuia*
- T. impetiginosa* (ipê-roxo; pau d'arco) 2, 5, 11, 69, 81-90, 258, 291, 295, 303
 - T. serratifolia* (ipê-amarelo) 93, 307
- tables, circumference/height 246
- Táchira, Venezuela 47

- Tachornis squamata* (andorinhão do buriti; fork-tailed palm swift; tesorinha) 181, 315
- Taiwan Province of China 59
- tambaqui (black-finned pacu; *Colossoma macropomum*) 125, 261, 316
- tanagers
- blue-grey 45, 315
 - palm 45, 315
 - silver-beaked 45, 315
- tannins 112
- Tapajós, Pará State, Brazil 122-3, 127
- Tapajós National Forest, Pará State, Brazil 36, 288, 298
- Tapajós river xxiv(map), 126, 223, 260, 295
- taperibá/taperebá (*Spondias globosa*) 224
- tapioca xxiii
- tapirs 76, 94, 97, 119, 165, 181, 186, 189, 224, 293
- Brazilian [lowland] 142, 148, 178, 181, 195, 312
- Tapirus* 76, 94, 97, 119, 165, 181, 186, 189, 224, 293
- T. terrestris* (anta; Brazilian tapir; lowland tapir) 142, 148, 178, 181, 195, 312
- tapping *see* extraction *and* rubber tapping
- tapurus 193
- turus 178
- Taquandeuá, Pará State, Brazil 45
- Tarauacá, Acre State, Brazil 2(map), 72, 226
- tatajuba (*Bagassa guianensis*; *Maclura tinctoria*) 21, 115, 308
- tatu (nine-banded [long-nosed] armadillo; tatu branco; tatu galinha; *Dasyops novemcinctus*) 115, 116, 310
- tatu branco (nine-banded [long-nosed] armadillo; tatu; tatu galinha; *Dasyops novemcinctus*) 115, 116, 310
- tatu galinha (nine-banded [long-nosed] armadillo; tatu; tatu branco; *Dasyops novemcinctus*) 115, 116, 310
- tatu pretinho (seven-banded [long-nosed] armadillo; tatuí; *Dasyops septemcinctus*) 115, 310
- tatuí (seven-banded [long-nosed] armadillo; tatu pretinho; *Dasyops septemcinctus*) 115, 310
- Tauaú, Pará State, Brazil 49
- Tayassu* 57, 76, 125, 142, 165, 178, 181, 186, 189, 195, 210, 221, 224, 225, 261
- T. pecari* (porcão; queixada; white-lipped peccary) 97, 119, 148, 181, 195, 312
 - T. tajacu* (catitu; collared peccary) 116, 119, 148, 181, 189, 312
- teas
- ayahuasco 270, 290
 - medicinal 29, 32, 52, 68, 74, 91, 142, 161, 163
 - recipes 69, 83-4, 94
 - storage 84
- television, access to 267
- television programmes 142
- Tembé, Pará State, Brazil 88, 130, 221
- Tembé Indians 88
- tento (*Ormosia* spp.) 142, 308
- Teresina, Piauí State, Brazil 2(map), 41, 181
- termites 74
- terra firme forest xxiii, 13, 30, 31, 47, 66, 72, 86, 129, 139, 165, 170, 171, 183, 205, 217, 218, 220, 223, 225, 226, 227, 228, 288
- terra preta 203
- tesorinha (andorinhão do buriti; fork-tailed palm swift; *Tachornis squamata*) 181, 315
- Tetragastris* spp. 221
- Theobroma* 215, 222-3, 288, 305-6
- T. bicolor* 222
 - T. cacao* (cacao) 36, 164, 222, 223, 288, 305
 - T. grandiflorum* (cupuaçu) 44, 56, 61, 150, 164, 222, 223, 286, 287, 306
 - T. mariae* *see* *Herrania mariae*
 - T. microcarpum* (cacaarana) 223, 306
 - T. obovatum* (cabeça de urubu; cacau de macaco; cacau do Peru; cacaarana) 223, 306
 - T. speciosum* (cacauí) 223, 306
- thinning 203
- Thomas's [long-tongued] nectar bat (*Lonchophylla thomasi*) 117, 311
- Thraupis*
- T. episcopus* (blue-grey tanager; sanhaçu da amazônia) 45, 315
 - T. palmarum* (palm tanager; saí açu pardo; sanhaçu do coqueiro) 45, 315
- threatened species
- and logging 291, 295
 - see also* Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- thresholds, forest recovery 5, 242, 293
- Thyrsodium paraense* (amaparana) 259
- timber *see also* wood
- timber calculations
- value 243-4
 - volume 245-6
- timber extraction 233
- alternatives to
 - andiroba oil extraction 37
 - fruit harvesting 42-3, 143
 - medicines 100
 - seed harvesting 21, 93, 103
 - authorizations 246
 - and piquiá consumption 5, 239-40, 242
 - sustainable levels 242, 260
 - see also* logging
- timber industry 292

- timber marketing 288, 295
 timber prices 295
 timber sales
 community reflections on 236-7, 252-3
 contracts 247, 254, 295
 cost-benefit comparisons 42-3, 93, 143, 145, 242, 261
 disadvantages of 236-7
 value calculations 243-4
 Timóteo, Eliete xvii, 268
 tinamou (inhambu; nambu; *Crypturellus* spp.; *Tinamus* spp.) 165, 259, 315
Tinamus spp. (inhambu; nambu; tinamou) 165, 259, 315
 Tinigua National Park, Colombia 296
 Tinker Foundation iv
 tipiti xxiii, 34, 178, 195
 titica (cipó titica; nibbi; *Heteropsis flexuosa*) 129-38, 288, 289; 293, 294, 297, 303
 tobacco pouches 178
 Tocantins river xxiv(map), 160, 192, 208, 275
 Tocantins State, Brazil 2(map), 251, 286
 toilet paper 178
 Tomé-Açu, Pará State, Brazil 2(map), 73, 83, 244
 tools, tapping 75, 87
 tortoises 76, 181, 221, 224, 258
 red-footed 315
 South American yellow-footed 115, 316
 toucans 165, 172
 white-throated [Cuvier's] 195, 315
 tourism 289
Tovomita spp. (bacuri da várzea) 216, 305
 toxic barks 95
 toys 161, 177, 178, 185
 traditional healers v
 traditional knowledge
 of forest trees 207
 loss of 33, 296
 shared with scientific researchers x, xiii, 1, 2, 12, 15, 33-5, 138, 161, 207
 see also indigenous peoples
 train seats 133
 Transcarnetá, Pará State, Brazil 118
 transport of forest products 250
 costs 17
Trattinnickia spp. 221
 tree-planting
 on degraded land 37, 62
 after fires 107
 by loggers 21, 93
 in secondary forest 258
 see also agroforestry management and reforestation
 trees by land area see density
 Trinidad and Tobago xxiv(map), 223
 tripwires, dangers of using 148
 Trombetas, Amazonas State, Brazil 2(map), 50, 62
 trunks, tree
 measurement xxii, 13
 see also palm trunks
 tucandeira ant (*Paraponera* spp.) 138
 tucano grande de papo branco (Cuvier's toucan; white-throated toucan; *Ramphastos tucanus*) 195, 315
 tucumã
 species differences 209
 tucumã-í (*Astrocaryum acaule*) 209, 212, 308
 tucumã of Amazonas (jabarana; *Astrocaryum aculeatum*; *A. tucuma*) 142, 190, 205-13, 287, 288, 290, 295, 303
 tucumã do Pará (*Astrocaryum vulgare*) 209, 308
 tucupi xxiii
 Tucuruí, Pará State, Brazil 60
 tufted capuchin (black-capped capuchin; brown capuchin; macaco prego; *Cebus apella*) 57, 165, 310
 Tupinambá Indians 178
 turtles 165, 261
 tyres 122, 123, 126, 280
- U**
 UAG see French Guiana, University of
 UAM see Madrid, Independent University of
 Ucayali, Peru 2(map), 216, 224
 uchi (uxi; *Endopleura uchi*) 2, 11, 12, 20, 44, 116, 119, 139-52, 216, 258, 287, 291, 296, 303
 ucuúba (*Virola michelii*) 85, 166, 308
 UdeA see Antioquia, University of
 UF see Florida, University of
 UFAC see Acre, Federal University of
 UFPA see Pará, Federal University of
 UFRA see Amazonia, Federal Rural University of
 UFRJ see Rio de Janeiro, Federal University of
 Uhl, Chris 162
 umarí (*Poraquieba* spp.) 216, 308
 UnB see Brasília, Federal University of
Uncaria 289, 290, 292
 U. guianensis (cat's claw; jupindá; unha-de-gato) 65-70, 285, 303
 U. tomentosa (cat's claw; jupindá; unha-de-gato) 65-70, 285, 303
 UNESP see São Paulo State University
 ungurahua (*Oenocarpus batoua* subsp. *batoua*) 292
 unha-de-gato (cat's claw; jupindá; *Uncaria guianensis*; *U. tomentosa*) 65-70, 285, 289, 290, 292, 303
 União Vegetal 270
 UNICAMP see Campinas, University of

- United Kingdom
 Royal Botanic Gardens, Kew 126
- United States of America
 Atlantic City Boardwalk 81
 Florida 248-9
 imports 297
 açai 164
 andiroba oil 32
 Brazil nuts 51
 cat's claw 67
 copaiba oil 73
 ipê-roxo bark (pau d'arco) 81
 ipê-roxo timber 90
 jatobá timber 99-100
 mahogany timber 104
 vegetable leather 125
 New York Botanical Garden (NYBG) xv, xvi, xvii, xviii, xx
 universities
 Brazil
 Acre (UFAC) xiv, xv, xvi, xviii
 Brasília (UnB) 179
 Campinas (UNICAMP) xvii
 Federal Rio de Janeiro (UFRJ) 179
 Federal Rural Amazonia (UFRA) xvi
 Pará (UFPA) xiv, xvi, 33, 52, 95
 São Paulo State (UNESP) xiv, xix
 Colombia
 Antioquia (UdeA) xvii, xx
 French Guiana (UAG) 52
 Germany
 Freiburg xix
 Spain
 Madrid (UAM) xvii
 USA
 California State (CSU), Stanislaus xiv, xx
 Florida (UF) xiv, xvii, xix, xx
 Indiana (IU) xiv, xviii
 Oregon State (OSU) xiv
 Yale xiv, xix
- urban areas
 ayahuasca consumption in 270
 forest product consumption in 2, 39, 167, 293
 raising awareness of native plants in 9, 23
- uricuri (aricuri; *Attalea phalerata*) 183, 190, 308
- urucu (annatto; *Bixa orellana*) 29, 32, 308
- USAID iv
- uses of forest products by tree parts 14
 bark
 andiroba 29, 32
 Brazil nut 52
 cat's claw 68, 69
 copaiba 73, 74
 ipê-roxo 81, 83-4
 jatobá 91, 94
 uxi 139, 142
- flowers
 piquiá 112
- fronds
 inajá 183, 185
- fruit 14
 açai 161
 açai (solitary) 171
 bacuri 41, 43
 Brazil nut 52
 buriti 177, 179, 180, 181
 cacau 222
 cajá de jaboti 224
 inajá 185
 jatobá 94
 pataua 193
 piquiá 112
 pupunha 199, 204
 tucumã of Amazonas 209
 uxi 142
- fruit bracts
 inajá 185
- fruit stalks
 açai 161
 inajá 185
 pataua 193
- latex
 amapá 260
 bacuri 43
 rubber tree 122, 123
- leaves
 açai 161
 açai (solitary) 171
 buriti 178
 cat's claw 68
 jatobá 94
 pataua 193
 tucumã of Amazonas 209
- nuts
 Brazil nut 52, 274
- oils
 andiroba 23, 29, 32, 237
 babassu 272
 bacuri 43
 Brazil nut 52
 buriti 178, 179, 292
 copaiba 71, 74
 pataua 193
 piquiá 112
 pupunha 199
 uxi 142

- palm hearts
 açai 161, 163
 açai (solitary) 171
 inajá 185
 patauá 193
 pupunha 199
- palm trunks
 açai 161
 açai (solitary) 171
 buriti 175, 178, 180
 patauá 193
 pupunha 203
 tucumã of Amazonas 209
- resin
 jatobá 94
- rind
 bacuri 44
 piquiá 112
- roots
 açai 161
 açai (solitary) 171
 cat's claw 68
 titica 129, 131, 134
- sap
 buriti 180
- seeds 21, 123, 274
 açai 142, 143, 161, 163
 açai (solitary) 171
 andiroba 29, 32, 294
 bacuri 40
 buiuçu 274
 buriti 177, 179
 cacau 222
 inajá 184, 274
 jatobá 274
 jupati 274
 matamatá 274
 murumuru 274
 patauá 193
 piquiá 112
 rubber tree 123, 274
 tucumã of Amazonas 208, 209, 274
 uxi 142-3
- stems
 buriti 178
- vines 166
 cat's claw 68
 titica 129, 131, 134, 261
- wood 20
 amapá 260
 andiroba 29, 32
 bacuri 43
 Brazil nut 52
 copaíba 74
 ipê-roxo 81, 83
 jatobá 94
 mahogany 105, 273
 piquiá 111, 112
 pupunha 197, 199
 uxi 142, 149
see also medicinal uses of forest products *and* recipes
- uxi (uchi; *Endopleura uchi*) 2, 11, 12, 20, 44, 116, 119, 139-52, 216, 240-1, 7, 291, 296, 303
- uxi fruit
 consumption 143, 144, 239
- uxi oil 146
 extraction 147
 uses 142
- uxi powder 141, 142
- uxirana (*Sacoglottis* spp.) 142, 274, 308
- V**
- VALE xiv, xvi
- valuing the forest
 differing perspectives 233-54
see also economic value of forest products *and* invisible benefits from forest products
- van Leeuwen, Johannes xv, xvi, xx, 59, 205
- Vanjoca (from Capim Community) xvii
- variations in productivity
 same-species trees 51, 72, 92, 111, 140, 250, 290
- varnishes 74, 94, 136
- várzea (seasonally/tidally flooded forest) xxiii, 30, 31, 47, 66, 158, 165, 175, 216, 217, 218, 219, 220, 224, 226, 227, 282
- várzea, roçados de (floodplain gardens) 168
- veado branco (grey brocket deer; *Mazama gouazoubira*) 119, 172, 181, 311
- veado capoeira (red brocket deer; veado mateiro; veado pardo; veado vermelho; *Mazama americana*) 115, 116, 119, 172, 181, 311
- veado mateiro *see* veado capoeira
- veado pardo *see* veado capoeira
- veado vermelho *see* veado capoeira
- vegetable leather 123, 125
- vegetable protein *see* Brazil nuts
- Venezuela xxiii, xxiv(map), 2(map), 39, 49, 65, 102, 122, 129, 158, 191, 197, 204, 216, 223, 224, 225, 227
 Barinas 47
 Táchira 47
- Verissimo, Aldaberto xiii
- veronica (*Dalbergia monetaria*; *D. subcymosa*) 69, 86, 308
- Ver-o-Peso market, Belém 41, 67, 73, 92, 111, 141, 157, 184, 193

- veterinary uses of forest products 29, 33, 43, 73, 75
 Vicente, Carlos xiii
 Vieira, Ima 234
 villagers *see* indigenous peoples *and* local people
 vines 89, 108, 166, 251, 259
 cat's claw
 bark 66
 production times 70
 uses 68
 yield 66
 titica
 uses 129, 131, 134, 261
 yield 131, 136
 see also growth (length)
Virola michelii (ucuúba) 85, 166, 308
 Viseu, Pará State, Brazil 140
 vitamins
 A 4, 9, 164, 179, 200, 209, 290
 B 9, 54, 146, 164
 C 9, 44, 95, 146, 164
 E 146
 Vogt, Nathan xiv, xx, 157
 volume calculations, timber 245-6
 vultures 281
- W**
- Wadt, Lúcia Helena de Oliveira xiv, xx, 49
 Waimiri Atroari Indians 292
 Waldhoff, Philippe xvi, 19
 Wallace, Richard xiv, 129
 warnings *see* health and safety cautions
 water
 from cat's claw 68
 pollution 278
 purification by Brazil nut charcoal 52
 quality 4
 seed dispersal by 158, 165
 watermelon 164
 waterproof fabrics 123
 water-resistant wood 112
 weaving 193
 wedding rituals 178
 weeds
 role in ethnopharmacology 296
 weevils
 pollination by 198
 whistling the wind and fruit 145
 white-bellied parrot (marianinha de cabeça amarela;
Pionites leucogaster) 45, 314
 white-bellied spider monkey (coatá; long-haired
 spider monkey; macaco aranha; *Ateles belzebuth*)
 195, 309
 white-eyed conure (periquitão maracanã; white-
 eyed parakeet; *Aratinga leucophthalma*) 45, 313
 white-eyed parakeet (periquitão maracanã; white-
 eyed conure; *Aratinga leucophthalma*) 45, 313
 white-lipped peccary (porcão; queixada; *Tayassu*
pecari) 97, 119, 148, 181, 195, 312
 white-throated toucan (Cuvier's toucan; tucano
 grande de papo branco; *Ramphastos tucanus*) 195,
 315
 WHRC *see* The Woods Hole Research Centre
 Wickham, Henry 126
 wild pupunha (chica-chica; pupunha brava;
Aiphanes aculeata) 204, 308
 wildlife 291
 amphibians 57, 316
 birds 293, 297, 312-15
 fishes 125, 165, 181, 261, 276, 278, 316
 fruit in diet xxiv, 14, 36, 45, 57, 76, 97, 109, 112,
 115-16, 119, 125, 142, 148, 165, 172, 178,
 181, 183, 186, 195, 202, 210, 224
 insects 29, 33, 36, 45, 57, 58, 63, 72, 99, 138,
 142, 149, 198, 294
 mammals 57, 288, 309-12
 reptiles 76, 115, 165, 261, 315-16
 see also game *and* *under species*
 wildlife calls
 and music 274
 wildlife conservation 296
 wildlife corridors 43, 188, 256
 wildlife diversity 97
 wildlife habitats 97
 wildlife management 286
 wind damage 102, 241
 women 18
 andiroba oil businesses 36, 37
 babassu breakers 272, 285
 business diversification 251
 income for 36, 137, 177, 251, 271
 participation in forest management 265, 271-2,
 279
 patauá oil extraction 192
 respect for 36
 role of viii
 titica vine management 135, 136-7, 288
 see also gender differences
 women's associations 135, 136, 271, 288
 wood 259
 from downed trees
 community uses 260
 insect-resistance 74
 rot-resistance 81, 112
 splinter-resistance 94, 105, 112

- uses for 20
 - andiroba 29, 32
 - amapá 260
 - bacuri 43
 - Brazil nut 52
 - copaíba 74
 - ipê-roxo 81, 83
 - jatobá 94
 - mahogany 105, 273
 - piquiá 111, 112
 - pupunha 197, 199
 - uxi 142, 149
- water-resistance 112
- see also* timber
- The Woods Hole Research Centre (WHRC) iv, xvi, xvii, xviii, xix
- Woods & Wayside International (WWI) iv, xiv, xv, xvi, xx
- woodsmen *see* mateiros
- worker's rights 262, 263
- workshops 16, 18, 20
 - crafts 136
 - furniture-making 260-1
 - instrument-making 273, 274
- World Agroforestry Centre (ICRAF) xvii
- wormseed (mastruz; *Chenopodium ambrosioides*) 86, 307
- Wunder, Sven xv
- WWI *see* Woods & Wayside International

X

- Xapuri, Acre State, Brazil 2(map), 123, 285, 292, 297
- xexéu (yellow-rumped cacique; *Cacicus cela*) 45, 313
- Xingu river xxiv(map), 228
- Xylocopa* spp. 57

Y

- Yale University, USA xiv, xix
- yellow-rumped cacique (xexéu; *Cacicus cela*) 45, 313
- yields *see* productivity

Z

- Zé, Senhor (logger) 237
- Zenaide, Dona 272
- zinc, dietary 54
- zoological parks
 - Acre, Brazil 78

NON-WOOD FOREST PRODUCTS

1. Flavours and fragrances of plant origin (1995)
2. Gum naval stores: turpentine and rosin from pine resin (1995)
3. Report of the International Expert Consultation on Non-Wood Forest Products (1995)
4. Natural colourants and dyestuffs (1995)
5. Edible nuts (1995)
6. Gums, resins and latexes of plant origin (1995)
7. Non-wood forest products for rural income and sustainable forestry (1995)
8. Trade restrictions affecting international trade in non-wood forest products (1995)
9. Domestication and commercialization of non-timber forest products in agroforestry systems (1996)
10. Tropical palms (1998)
11. Medicinal plants for forest conservation and health care (1997)
12. Non-wood forest products from conifers (1998)
13. Resource assessment of non-wood forest products
Experience and biometric principles (2001)
14. Rattan – Current research issues and prospects for conservation and sustainable development (2002)
15. Non-wood forest products from temperate broad-leaved trees (2002)
16. Rattan glossary and Compendium glossary with emphasis on Africa (2004)
17. Wild edible fungi – A global overview of their use and importance to people (2004)
18. World bamboo resources – A thematic study prepared in the framework of the Global Forest Resources Assessment 2005 (2007)
19. Bees and their role in forest livelihoods – A guide to the services provided by bees and the sustainable harvesting, processing and marketing of their products (2009)
20. Fruit trees and useful plants in Amazonian life (2011)

Fruit trees and useful plants in Amazonian life, a collaboration between CIFOR and FAO, serves two main purposes: it provides rich information on Amazon fruits and Amazon communities, illustrating how local peoples have adopted and adapted to the plant kingdom around them to distil vital nutrients, medicines and other products fundamental to their survival; it also shows how scientific information can be presented in an innovative and more inclusive way, one that can be adapted accordingly by other actors worldwide.

The publication is a testament to the enormous potential that integrating traditional and scientific knowledge can have for both local communities and academic and development professionals alike. It also serves as a reminder to the scientific community that science should be shared with local people and not confined to journals and closed circles of technical experts. From Brazil nuts and Cat's claw to Copaiba and Titica, this publication shares a wealth of information on a wide range of plant species that only close collaboration between local peoples and researchers could possibly breed.



We must consider the impact of each of our decisions on the next seven generations.



**INTERNATIONAL YEAR
OF FORESTS • 2011**

ISBN 978-92-5-107007-9 ISSN 1020-3370



9 789251 070079

12360E/1/09.11