AMAZONIA CAMTRAP*: a dataset of mammal, bird and reptile species recorded with camera traps in the Amazon forest*

Ana Carolina Antunes [16,18,36]; Anelise Montanarin [26,37]; Diogo Maia Gräbin [26,66]; Erison Carlos dos Santos Monteiro [70]; Fernando Ferreira de Pinho [82,26,21]; Guilherme Costa Alvarenga [26, 122]; Jorge Ahumada [6]; Robert B. Wallace [115]; Emiliano Esterci Ramalho [26,41]; Adrian Paul Ashton Barnett [36,74]; Alex Bager [75]; Alexandre Martins Costa Lopes [29,100]; Alexine Keuroghlian [48]; Aline Giroux [27,80]; Ana María Herrera [114]; Ana Paula de Almeida Correa [1]; Ana Yoko Meiga [1]; Anah Tereza de Almeida Jácomo [40]; Ananda de Barros Barban [41]; André Antunes [52]; André Giovanni de Almeida Coelho [27]; André Restel Camilo [10]; André Valle Nunes [79]; Andréa Cristina dos Santos Maroclo Gomes [2]; Antônio Carlos da Silva Zanzini [77]; Arlison Bezerra Castro [94]; Arnaud Léonard Jean Desbiez [53]; Axa Figueiredo [36]; Benoit de Thoisy [43]; Benoit Gauzens[16,18]; Brunno Tolentino Oliveira [2]; Camilla Angélica de Lima [31,8]; Carlos Augusto Peres [106]; Carlos César Durigan [117]; Carlos Rodrigo Brocardo [96,39]; Clarissa Alves da Rosa [34]; Claudia Zárate-Castañeda [116]; Claudio M. Monteza-Moreno [54,15]; Cleide Carnicer [64]; Cristiano Trape Trinca [51]; Daiana Jeronimo Polli [69,40]; Daniel da Silva Ferraz [11]; Daniel F Lane [44]; Daniel Gomes da Rocha [104,26]; Daniele Cristina Barcelos [26]; David Auz [57]; Dian Carlos Pinheiro Rosa [95]; Diego Afonso Silva [72]; Divino Vicente Silvério [28,102]; Donald P. Eaton [48]; Eduardo Nakano-Oliveira [30]; Eduardo Venticinque [101]; Elildo Carvalho Junior [23]; Eloisa Neves Mendonça [24]; Emerson Monteiro Vieira [59]; Emiliana Isasi-Catalá [116]; Erich Fischer [78]; Erika Paula Castro [75]; Erison Gomes Oliveira [36]; Fabiano Rodrigues de Melo [64,89]; Fábio de Lima Muniz [93]; Fabio Rohe [36]; Fabrício Beggiato Baccaro [36,92]; Fernanda Michalski [90,41]; Fernanda Pozzan Paim [25]; Fernanda Santos [47]; Fernando Anaguano [118]; Francesca Belem Lopes Palmeira [51]; Francielly da Silva Reis [55]; Francisca Helena Aguiar-Silva [60,38]; Gabriel de Avila Batista [2,73]; Galo Zapata-Ríos [118]; German Forero-Medina [114]; Gilson De Souza Ferreira Neto [36]; Giselle Bastos Alves [87,40]; Guido Ayala [115]; Gustavo Henrique Prado Pedersoli [1]; Hani R. El Bizri[121]; Helena Alves do Prado [2]; Hugo Borghezan Mozerle [4]; Hugo C.

M. Costa [67,32]; Ivan Junqueira Lima [25]; Jaime Palacios [118]; Jasmine de Resende Assis [87,40]; Jean P Boubli [108]; Jean Paul Metzger [62]; Jéssica Vieira Teixeira [2]; João Marcelo Deliberador Miranda [68]; John Polisar [113]; Julia Salvador [118,50]; Karen Borges-Almeida [28]; Karl Didier [113]; Karla Dayane de Lima Pereira [2]; Kelly Torralvo [37,25]; Krisna Gajapersad [7]; Leandro Silveira [40]; Leandro Uceli Maioli [111]; Leonardo Maracahipes-Santos [28,64]; Leonor Valenzuela [114]; Letícia Benavalli [86,40]; Lydia Fletcher[120]; Lucas Navarro Paolucci [28,76]; Lucas Pereira Zanzini [63]; Luciana Zago da Silva [13]; Luiz Cláudio Ribeiro Rodrigues [1]; Maíra Benchimol [66]; Marcela Alvares Oliveira [84,14]; Marcela Lima [97]; Marcélia Basto da Silva [99]; Marcelo Augusto dos Santos Junior [17]; Maria Viscarra [115]; Mario Cohn-Haft [33]; Mark Ilan Abrahams [3]; Maximiliano Auguto Benedetti [109]; Miriam Marmontel [27]; Myriam R Hirt[16,18]; Natália Mundim Tôrres [87,40]; Orlando Ferreira Cruz Junior [36]; Patricia Alvarez-Loayza [9]; Patrick Jansen [54,112]; Paula Ribeiro Prist [62]; Paulo Monteiro Brando [28,119,105]; Phamela Bernardes Perônico [2]; Rafael do Nascimento Leite [117,36]; Rafael Magalhães Rabelo [37,25]; Rahel Sollmann [104]; Raone Beltrão-Mendes [85]; Raphael Augusto Foscarini Ferreira [1]; Raphaella Coutinho [20]; Regison da Costa Oliveira [36]; Renata Ilha [36,26]; Renato Richard Hilário [91]; Ricardo Araújo Prudente Pires [8]; Ricardo Sampaio [23,61]; Roberto da Silva Moreira [20]; Robinson Botero-Arias [107,71,35]; Rodolofo Vasquez Martinez [42]; Rodrigo Affonso de Albuquerque Nóbrega [81]; Rodrigo Ferreira Fadini [95]; Ronaldo G Morato [23]; Ronaldo Leal Carneiro [2]; Rony Peterson Santos Almeida [98,46]; Rossano Marchetti Ramos [22]; Roxane Schaub [5,103]; Rubem Dornas [83]; Rubén Cueva [118]; Samir Rolim [1]; Samuli Laurindo [70,88]; Santiago Espinosa [56,49]; Taís Nogueira Fernandes [110]; Tania Margarete Sanaiotti [36]; Thiago Henrique Gomide Alvim [65]; Tiago Teixeira Dornas [1]; Tony Enrique Noriega Piña [91]; Victor Lery Caetano Andrade [45,36]; Wagner Tadeu Vieira Santiago [58]; William E. Magnusson [34]; Zilca Campos [12]; Milton Cezar Ribeiro [70]

1 Amplo Engenharia e Gestão de Projetos Ltda., Rua Engenheiro Carlos Antonini 37, São Lucas, Belo Horizonte, MG, 30240-280, Brasil

2 Biota Projetos e Consultoria Ambiental Ltda, Rua 86-C, 64, Setor Sul, Goiânia, GO, 74083-360, Brasil

3 Bristol Zoological Society, Field Conservation and Science Department, Bristol, United Kingdom

4 Caipora Cooperativa para Conservação da Natureza, Av. Desembargador Vítor Lima, 260/908, Trindade, Florianópolis, SC, 88040-400, Brasil

5 Centre Hospitalier de Cayenne, Centre d'Investigation Clinique Antilles-Guyane (CIC AG), Inserm 1424, Cayenne, French Guiana

6 Conservation International 2011 Crystal Dr.Suite 600 Crystal City, VA, 20912, United States of America

7 Conservation International Suriname, Paramaribo, Suriname

8 DBO Engenharia Ltda, Rua 25, 190, Jardim Goiás, Goiânia, GO, 74805-480, Brasil

9 Duke University, Center for Tropical Conservation, Durham, NC, United States of America

10 Smithsonian Conservation Biology Institute, Virginia, Post Code: 22630, United States of America

11 Ecodiversa - Rede Eco-Diversa para Conservação da Biodiversidade, Tombos, MG, Brasil

12 Embrapa Pantanal, Laboratório de Vida Selvagem, Corumbá, MS, Brasil

13 Faculdade Guairacá, Rua XV de novembro, 7050, Centro, Guarapuava, PR, 85010-000, Brasil

14 Centro Universitário Aparício Carvalho, Coordenação de Ciências Biológicas, rua das Araras, 241, Jardim Eldorado, Porto Velho, RO, 76811-678, Brasil

15 Max Planck Institute of Animal Behavior, Department for the Ecology of Animal Societies, Bücklestraße 5, 78467 Konstanz Radolfzell, Konstanz, DE 78315, Germany

16 Institute of Biodiversity, Friedrich Schiller University Jena, Jena, Germany

17 Fundação Vitória Amazônica, rua Estrela D'alva, 146, Aleixo, Manaus, AM, 69060-093, Brasil

18 German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, EcoNetLab, Deutscher Platz 5e, 04103, Leipzig, Germany

19 German Centre for Integrative Biodiversity Research, Leipzig, Germany

20 Independent Researcher

21 Instituto Biotrópicos, Praça Monsenhor Neves, 44, Diamantina, MG, Brasil

22 Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA), Centro Nacional de Prevenção e Combate aos Incêndios Florestais (Prevfogo), Núcleo de Pesquisa e Monitoramento, Brasília, DF, Brasil

23 Instituto Chico Mendes de Conservação da Biodiversidade, Centro Nacional de Pesquisa e Conservação de Mamíferos Carnívoros (CENAP/ICMBio), Estrada Municipal Hisaichi Takebayashi, 8600, Usina, Atibaia, SP, 12952-011, Brasil

24 Instituto Chico Mendes de Conservacao da Biodiversidade, Reserva Biológica do Gurupi, BR 222, km 12, Pequiá, Brasília, DF, 70670-350, Brasil

25 Instituto de Desenvolvimento Sustentável Mamirauá, Estrada do Bexiga, 2584, Tefé, AM, 69553-225, Brasil

26 Instituto de Desenvolvimento Sustentável Mamirauá, Grupo de Pesquisa em Ecologia e Conservação de Felinos na Amazônia, Estrada do Bexiga, 2584, Fonte Boa, Tefé, AM, 69553-225, Brasil

27 Instituto de Desenvolvimento Sustentável Mamirauá, Grupo de Pesquisa em Mamíferos Aquáticos Amazônicos, Estrada do Bexiga, 2584, Fonte Boa, Tefé, AM, 69553-225, Brasil

28 Instituto de Pesquisa Ambiental da Amazônia (IPAM), Canarana, MT, 78640-000, Brasil

29 Instituto de Pesquisa e Conservação de Tamanduás no Brasil, Parnaíba, PI, 64207-750, Brasil

30 Instituto de Pesquisas Cananéia (IPeC), Av. Nina, 423, Retiro das Caravelas, Cananéia, SP, 11990-000, Brasil

31 Instituto Federal de Educação, Ciência e Tecnologia Goiano, Programa de Pós-Graduação em Conservação de Recursos Naturais do Cerrado, Urutaí, GO, Brasil

32 Instituto Juruá, Rua das Papoulas, 97, Aleixo, Manaus, AM, 69083-300, Brasil

33 Instituto Nacional de Pesquisas da Amazônia (INPA), Coleções Zoológicas, Coleção de Aves, Av. André Araújo, 2936, Petrópolis, Manaus, AM, 69083-000, Brasil

34 Instituto Nacional de Pesquisas da Amazônia (INPA), Coordenação de Biodiversidade, Av. André Araújo, Petrópolis, Manaus, AM, 69067-375, Brasil

35 Instituto de Desenvolvimento Sustentável Mamirauá, Programa de Pesquisa em Conservação e Manejo de Jacarés, Estrada do Bexiga, 2584, Tefé, AM, 69553-225, Brasil

36 Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, AM, 69067-375, Brasil

37 Instituto Nacional de Pesquisas da Amazônia (INPA), Programa de Pós-Graduação em Ecologia, Manaus, AM, 69067-375, Brasil

38 Instituto Nacional de Pesquisas da Amazônia (INPA), Projeto Harpia, Manaus, AM, 69067-375, Brasil

39 Instituto Neotropical: Pesquisa & Conservação, Curitiba, PR, Brasil

40 Instituto Onça-Pintada, Mineiros, GO, Brasil

41 Instituto Pró-Carnívoros, Av. Horácio Neto, 1030, Atibaia, SP, 12945-010, Brasil

42 Jardin Botanico de Missouri, Oxapampa, Oxapampa, Perú

43 Kwata NGO, Cayenne, French Guiana

44 LSU Museum of Natural Science, Ornithology 119 Foster Hall Baton Rouge, LA, 70803-3216, United States of America

45 Max Planck Institute for the Science of Human History, Department of Archaeology, Jena, Germany

46 Museu Paraense Emílio Goeldi, Coordenação de Ciências da Terra e Ecologia, Av. Perimetral, 1901, Terra Firme, Belém, PA, 66077-830, Brasil

47 Museu Paraense Emílio Goeldi, Departamento de Mastozoologia, Belém, PA, Brasil

48 Peccary Project/Projeto Queixada; R. Spipe Calarge, 2355 Campo Grande, MS, 79052-070, Brasil

49 Pontificia Universidad Católica del Ecuador, Facultad de Ciencias Exactas y Naturales, Escuela de Ciencias Biológicas, Quito, Pichincha, Ecuador

50 Pontificia Universidad Catolica del Ecuador, Facultad de Ciencias Exactas y Naturales, Quito, Ecuador

51 Programa Jaguar Juruena, Nova Bandeirantes, MT, Brasil

52 RedeFauna - Rede de Pesquisa em Diversidade, Conservação e Uso da Fauna da Amazônia, Manaus, AM, 69022-190, Brasil

53 Royal Zoological Society of Scotland, Conservation Department, Scotland, UK

54 Smithsonian Tropical Research Institute, Center for Tropical Forest Science, Panama, Republic of Panama

55 Uni-Anhanguera, Rua Euclides Bandeira, 1902, Goiânia, GO, 74423-115, Brasil

56 Universidad Autónoma de San Luis Potosí, Facultad de Ciencias, San Luis Potosí, S.L.P., c.p. 78290, Mexico

57 Universidad Central del Ecuador, Facultad de Ciencias Biológicas, Iquique N 14-121 y Sodiro - Itchimbia, Quito, 170155, Ecuador

58 Universidade de Aveiro, Centro de Estudos do Ambiente e do Mar (CESAM), Departamento de Biologia, 3810-193, Aveiro, Portugal

59 Universidade de Brasília, Instituto de Ciências Biológicas, Departamento de Ecologia, CP 04457, Brasília, DF, 70919-970, Brasil

60 Universidade de São Paulo, Centro de Energia Nuclear na Agricultura (CENA/USP), Piracicaba, SP, Brasil

61 Universidade de São Paulo, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Programa de Pós-Graduação em Biologia Comparada, Av. Bandeirantes, 3900, Ribeirão Preto, SP, 14040-901, Brasil

62 Universidade de São Paulo, Instituto de Biociências, Departamento de Ecologia, São Paulo, SP, Brasil

63 Universidade do Estado de Mato Grosso (UNEMAT), Campus Alta Floresta, Alta Floresta, MT, 78580-000, Brasil

64 Universidade do Estado de Mato Grosso (UNEMAT), Programa de Pós-Graduação em Ecologia e Conservação, Campus Nova Xavantina, Nova Xavantina, MT, Brasil

65 Universidade do Estado de Minas Gerais, Unidade Carangola, Praça dos Estudantes, 23, Santa Emília, Carangola, MG, 36800-000, Brasil

66 Universidade Estadual de Santa Cruz, Programa de Pós-Graduação em Ecologia e Conservação da Biodiversidade, Laboratório de Ecologia Aplicada à Conservação (LEAC), Rodovia Jorge Amado, km 16, Salobrinho, Ilhéus, BA, 45662-900, Brasil

67 Universidade Estadual de Santa Cruz, Programa de Pós-Graduação em Ecologia e Conservação da Biodiversidade, Rodovia Jorge Amado, km 16, Salobrinho, Ilhéus, BA, 45662-900, Brasil

68 Universidade Estadual do Centro-Oeste do Paraná, Departamento de Biologia, Laboratório de Biodiversidade de Mamíferos do Sul do Brasil, Campus CEDETEG, Rua Simeão Camargo Varela de Sá, 03, Guarapuava, PR, 85040-080, Brasil

69 Universidade Estadual Paulista (UNESP), Campus de Jaboticabal, Faculdade de Ciências Agrárias e Veterinárias (FCAV), Departamento de Biologia Aplicada à Agropecuária, Laboratório de Ecologia de Mamíferos (LEMa), Jaboticabal, SP, Brasil

70 Universidade Estadual Paulista (UNESP), Departamento de Biodiversidade, Avenida 24 A, 1515, Rio Claro, SP, 13506-900, Brasil

71 University of Florida, Tropical Conservation and Development Program, Center for Latin American Studies, Gainesville, FL, United States of America

72 Universidade Federal de Goiás, Instituto de Biociências, Laboratório de Biodiversidade Animal, Regional Jataí, BR 364, Km 195, 3800, Jataí, GO, 75801-615, Brasil

73 Universidade Federal de Goiás, The MetaLand Laboratory, Goiânia, GO, Brasil

74 Universidade Federal de Pernambuco, Departamento de Zoologia, Recife, PE, 50670-420, Brasil

75 Universidade Federal de Lavras, Centro Brasileiro de Estudos em Ecologia de Estradas, Lavras, MG, Brasil

76 Universidade Federal de Viçosa, Departamento de Biologia Geral, Viçosa, MG, Brasil.

77 Universidade Federal de Lavras, Departamento de Ciências Florestais, Setor de Ecologia e Manejo da Vida Silvestre, Campus S/N, Centro, Lavras, MG, 37200-000, Brasil

78 Universidade Federal de Mato Grosso do Sul, Instituto de Biociências, Campo Grande, MS, 79070-900, Brasil

79 Universidade Federal de Mato Grosso do Sul, Programa de Pós-Graduação em Ecologia e Conservação, Cidade Universitária, Campo Grande, MS, 79070-900, Brasil

80 Universidade Federal de Mato Grosso do Sul, Programa de Pós-Graduação em Ecologia e Conservação, Lab of Movement and Population Ecology (LAMPE), Cidade Universitária, Campo Grande, MS, 79070-900, Brasil

81 Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brasil

82 Universidade Federal de Minas Gerais, Departamento de Biologia Geral, Programa de Pós-graduação em Ecologia, Conservação e Manejo da Vida Silvestre, Av. Presidente Antônio Carlos, 6627, Belo Horizonte, MG, 31270-901, Brasil

83 Universidade Federal de Minas Gerais, Instituto de Geociências, Belo Horizonte, MG, Brasil

84 Universidade Federal de Rondônia, Programa de Pós-Graduação em Biodiversidade e Biotecnologia da Amazônia Legal, Rede BIONORTE, BR 364, km 9,5, S/N, Porto Velho, RO, Brasil

85 Universidade Federal de Sergipe, Departamento de Ecologia, Laboratório de Biologia da Conservação, Av. Marechal Rondon, S/N, Rosa Elze, São Cristóvão, SE, 49100-000, Brasil

86 Universidade Federal de Uberlândia, Instituto de Biologia, Laboratório de Ecologia de Mamíferos, Uberlândia, MG, Brasil

87 Universidade Federal de Uberlândia, Instituto de Biologia, Programa de Pós-Graduação em Ecologia e Conservação de Recursos Naturais, Laboratório de Ecologia de Mamíferos, Uberlândia, MG, Brasil

88 Universidade Federal de Viçosa, Departamento de Biologia Animal, Viçosa, MG, Brasil

89 Universidade Federal de Viçosa, Departamento de Engenharia Florestal, Avenida Purdue, s/nº, Campus Universitário, Viçosa, MG, 36570-900, Brasil

90 Universidade Federal do Amapá, Programa de Pós-Graduação em Biodiversidade Tropical, Laboratório de Ecologia e Conservação de Vertebrados, Macapá, AP, Brasil

91 Universidade Federal do Amapá, Programa de Pós-Graduação em Biodiversidade Tropical, Macapá, AP, Brasil

92 Universidade Federal do Amazonas, Departamento de Biologia, Av. General Rodrigo Otávio, 1200, Coroado I, Manaus, AM, 69067-005, Brasil

93 Universidade Federal do Amazonas, Departamento de Biologia, Laboratório de Evolução e Genética Animal, Manaus, AM, Brasil

94 Universidade Federal do Oeste do Pará, Instituto de Biodiversidade e Florestas, Laboratório de Ecologia e Conservação - LabECon, Rua Vera Paz, s/n, Campus Tapajós, Salé, Santarém, PA, 68035-110, Brasil

95 Universidade Federal do Oeste do Pará, Programa de Pós-Graduação em Biodiversidade, Laboratório de Ecologia e Conservação - LabECon, Rua Vera Paz, s/n, Campus Tapajós, Salé, Santarém, PA, 68035-110, Brasil

96 Universidade Federal do Oeste do Pará, Rua Vera Paz, s/n, Campus Tapajós, Salé, Santarém, PA, 68040-255, Brasil

97 Universidade Federal do Pará, Instituto de Ciências Biológicas, Belém, PA, Brasil

98 Universidade Federal do Pará, Programa de Pós-Graduação em Zoologia, Belém, PA, Brasil

99 Universidade Federal do Piauí, Centro de Educação Aberta e a Distância (CEAD), rua Olavo Bilac, 1148, Centro, Teresina, PI, 64001-280, Brasil

100 Universidade Federal do Piauí, Programa de Pós-Graduação em Biodiversidade e Conservação, Teresina, PI, Brasil

101 Universidade Federal do Rio Grande do Norte, Departamento de Ecologia , RN, Brasil

102 Universidade Federal Rural da Amazônia (UFRA), Departamento de Biologia, Capitão Poço, PA, 68650-000, Brasil

103 Université de Guyane, Laboratoire des Ecosystèmes Amazoniens et Pathologie Tropicale (EPaT) EA 3593, Labex CEBA, DFR Santé, Cayenne, French Guiana

104 University of California Davis, Department of Wildlife, Fish, and Conservation Biology, Graduate Group in Ecology, Davis, CA, United States of America

105 University of California, Department of Earth System Science, Irvine, CA, 92697, United States of America

106 University of East Anglia, Centre for Ecology, Evolution and Conservation, School of Environmental Sciences, Norwich, United Kingdom

107 University of Florida, Department of Wildlife Ecology and Conservation, Gainesville, FL, United States of America

108 University of Salford, School of Science Engineering and the Environment, Salford, United Kingdom

109 Vale S/A, Avenida dos Portugueses, s/n, Praia do Boqueirão, São Luís, MA, 65085-580, Brasil

110 Vale S/A, DIFP - Estudos Ambientais, Mina de Águas Claras, prédio 1, térreo, Av. Doutor Marco Paulo Simon Jardim, Nova Lima, MG, 34006-200, Brasil

111 Vale S/A, Gerencia de Meio Ambiente Serra Norte, Estrada Raymundo Mascarenhas, S/N, Parauapebas, PA, 68516-000, Brasil

112 Wageningen University, Department of Environmental Sciences, Wageningen, The Netherlands

113 Wildlife Conservation Society, Bronx, NY, United States of America

114 Wildlife Conservation Society, Cali, Valle del Cauca, 760046, Colombia

115 Wildlife Conservation Society, 340 Calle Gabino Villanueva, Calacoto, La Paz, Bolivia

116 Wildlife Conservation Society, Lima, 15047, Peru

117 Wildlife Conservation Society, Manaus, AM, 69010-230, Brasil

118 Wildlife Conservation Society, Quito, EC170501, Ecuador

119 Woodwell Climate Research Center, 149 Woods Hole Road, Falmouth, MA, 02540, United States of America

120 University of Salford, Salford, United Kingdom

121 Oxford Brookes University, Oxford Wildlife Trade Research Group, Oxford, UK

122 Wildlife Conservation Research Unit, Department of Zoology, University of Oxford, Recanati-Kaplan Centre, Tubney House, Abingdon Road, Tubney OX13 5QL, UK

INTRODUCTION

The Amazon is the largest and most biodiverse tropical rainforest on Earth, with 34 million people (RAISG 2009; ARA 2011), and half of the stored terrestrial carbon from tropical forests on the planet, a total of 100 billion tons of carbon in biomass (Feldpausch et al. 2012). This hyper-diverse region has more than 15,000 tree species (ter Steege et al. 2020) distributed in a variety of habitats, such as savannas, white sand forests (campinaranas), flooded and unflooded forests (Maretti et al. 2014). Intersecting these habitats, the Amazon river is the world's largest river basin in length and volume (Venticinque et al. 2016), holding 12 to 20% of global freshwater (Goulding et al. 2003). This complex and immense mosaic of habitats shelters more than 5520 vertebrate species (Da Silva, Rylands, and Da Fonseca 2005), and together, provides the world with essential ecosystem services (Fearnside 2018; Strand et al. 2018).

Despite the importance of this forest, the Amazon is currently facing the highest rates of deforestation and non-natural fire events in the last decade (Escobar 2019; INPE 2020). Increased human pressure comes on many fronts, such as land-grabbing, illegal mining, logging, infrastructure projects (e.g. roads and dams), and agricultural expansion (Richards, Walker, and Arima 2014; Lees et al. 2016; Sonter et al. 2017; Azevedo-Ramos and Moutinho 2018; Brancalion et al. 2018; Fearnside 2017). Despite numerous NGOs and scientists' warnings (Ferrante and Fearnside 2018; Lovejoy and Nobre 2018), few governmental actions have been taken to mitigate the impacts of these anthropogenic pressures. Moreover, some politicians seem to have opposing and contrary agenda, encouraging resource exploitation in Protected Areas (PAs), including the invasion of indigenous lands (ISA 2020; Andrade, Ferrante, and Fearnside 2021) and discrediting scientific information (Escobar 2019).

In this context, gathering data and generating scientific information on species occurrence and distribution patterns are pressing needs (Maestre et al. 2012) to support effective conservation measures (Jambari et al. 2019; De Marco et al. 2020). Among these, vertebrates play a crucial role in maintaining the essential ecosystem services provided by the Amazon forest (Brockerhoff et al. 2017). Herbivores contribute to the dispersal of a wide variety of plant species (Moreira-Ramírez et al. 2016; Regolin et al. 2020), so supporting both natural forest regeneration (Paolucci et al. 2019) and the long-term maintenance of above-ground carbon storage (Peres et al. 2016). Predators such as jaguars provide top-down pressure on their prey species, thereby regulating herbivore populations and preventing overexploitation of plants (Terborgh et al. 2001). Nevertheless, scientific knowledge of vertebrate species richness and composition is strongly spatially biased (Oliveira et al. 2016), and valuable data are usually scattered within peer-reviewed publications or grey literature, or in many cases neither published nor accessible.

Over the past two decades, the increasing use of camera traps for wildlife detection and monitoring has expanded our understanding of vertebrate species distributions and ecological relationships (O’Connell, Nichols, and Karanth 2011; Ahumada, Hurtado, and Lizcano 2013). Camera trapping is a non-invasive and cost-effective survey method that allows the detection of low density and elusive species that might otherwise be underestimated when monitoring studies and inventories using other methods are applied (Ahumada et al. 2011). Furthermore, studies using different methods to monitor biodiversity are usually hard to compare and integrate for broader biodiversity analysis (Steenweg et al. 2017). In this sense, camera traps have the potential to provide a more standardized tool for monitoring terrestrial vertebrate biodiversity (Steenweg et al. 2017), because human influence and error are limited to placement and maintenance of traps, evaluation of model effectiveness, and identification of the photographs (Ahumada et al. 2013). Despite such benefits, camera trap data is still fragmented and unavailable for many areas of the world (Ahumada et al. 2020). There is a current need for more collaborative networks, to increase coordination of camera trap surveys, and to make ecological data more freely available.

Considering the importance of the Amazon forest and the immediate threat to its ecosystems and species, this study aims to unify and summarize existing camera trap data by creating a large-scale repository of such data from within the Amazon. In this AMAZONIA CAMTRAP data paper, we summarize information from camera trap inventories conducted in the Amazon forest, including published and raw and unpublished data. This study represents the largest camera trap dataset ever organized for the Amazon forest.

METADATA

CLASS I – DATA SET DESCRIPTORS

A. Data set identity

Title: AMAZONIA CAMTRAP*: a dataset of mammal, bird and reptile species recorded with camera traps in the Amazon forest*

B. Data set and metadata identification code

AMAZONIA_CAMTRAP_DATASET.csv

AMAZONIA_CAMTRAP_METADATA.pdf

C. Data set description

Originators:

1. Ana Carolina Antunes. German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Theory in Biodiversity Science, Puschstraße 4, 04103, Leipzig; Friedrich-Schiller-Universitat Jena, Fürstengraben 1, 07743, Jena.

2. Guilherme Costa Alvarenga. Grupo de Pesquisa em Ecologia e Conservação de Felinos na Amazônia, Instituto de Desenvolvimento Sustentável Mamirauá. Rua Estrada do Bexiga, 2584, bairro Fonte Boa, Tefé-AM, 69.553-225, Brasil; Wildlife Conservation Research Unit, Department of Zoology, University of Oxford, Recanati-Kaplan Centre, Tubney House, Abingdon Road, Tubney OX13 5QL, UK.

3. Diogo Maia Gräbin. Grupo de Pesquisa em Ecologia e Conservação de Felinos na Amazônia, Instituto de Desenvolvimento Sustentável Mamirauá. Estrada do Bexiga, 2584, bairro Fonte Boa,

Tefé-AM, 69.553-225, Brasil; Programa de Pós-Graduação em Ecologia e Conservação da Biodiversidade, Universidade Estadual de Santa Cruz, Pavilhão Prof. Max de Menezes, 1º andar, sala 1 DA, Rodovia Jorge Amado, km 16 – Salobrinho, 45662-900, Ilhéus-BA, Brasil.

4. Erison Carlos dos Santos Monteiro. Laboratório de Ecologia Espacial e Conservação-LEEC, Departamento de Biodiversidade, Instituto de Biociências, Universidade Estadual Paulista "Júlio de Mesquita Filho"- UNESP- Avenida 24 A,1515, Rio Claro - SP, Brasil.

5. Anelise Montanarin. Grupo de Pesquisa em Ecologia e Conservação de Felinos na Amazônia, Instituto de Desenvolvimento Sustentável Mamirauá. Estrada do Bexiga, 2584, bairro Fonte Boa, Tefé-AM, 69.553-225, Brasil.

6. Fernando Ferreira de Pinho. Programa de Pós-Graduação em Ecologia, Conservação e Manejo da Vida Silvestre, Departamento de Biologia Geral, Universidade Federal de Minas Gerais. Avenida Antônio Carlos 6627, 31270-901, Belo Horizonte - MG, Brasil; Grupo de Pesquisa em Ecologia e Conservação de Felinos na Amazônia, Instituto de Desenvolvimento Sustentável Mamirauá. Estrada do Bexiga, 2584, bairro Fonte Boa, Tefé-AM, 69.553-225, Brasil.

Abstract:

The Amazon forest has the highest biodiversity on earth. However, information on Amazonian vertebrate diversity is still deficient and scattered across the published, peer-reviewed and grey literature and in unpublished raw data. Camera traps are an effective non-invasive method of surveying vertebrates, applicable to different scales of time and space. In this study, we organized and standardized camera trap records from different Amazon regions to compile the most extensive dataset of inventories of mammal, bird and reptile species ever assembled for the area. The complete dataset comprises 154,123 records of 317 species (185

birds, 119 mammals and 13 reptiles) gathered from surveys from the Amazonian portion of eight countries (Brazil, Bolivia, Colombia, Ecuador, French Guiana, Peru, Suriname and Venezuela). The most frequently recorded species per taxa were: mammals - *Cuniculus paca* (11,907 records); birds - *Pauxi tuberosa* (3,713 records); and reptiles - *Tupinambis teguixin* (716 records). The information detailed in this data paper opens-up opportunities for new ecological studies at different spatial and temporal scales, allowing for a more accurate evaluation of the effects of habitat loss, fragmentation, climate change and other human-mediated defaunation processes in one of the most important and threatened tropical environments in the world.

D: Keywords

Data paper, Vertebrates, Tropical forest, Amazonia

E: Description

The complete database includes camera trap data from 43 data sets, from 155 study areas, and contains a total of 154,123 records from 317 species (185 birds, 119 mammals and 13 reptiles). However, for our analysis, we considered only records from studies conducted within the Amazon forest limits (as defined by RAISG 2020 - Fig. 1) and where animals could be identified to the species level.

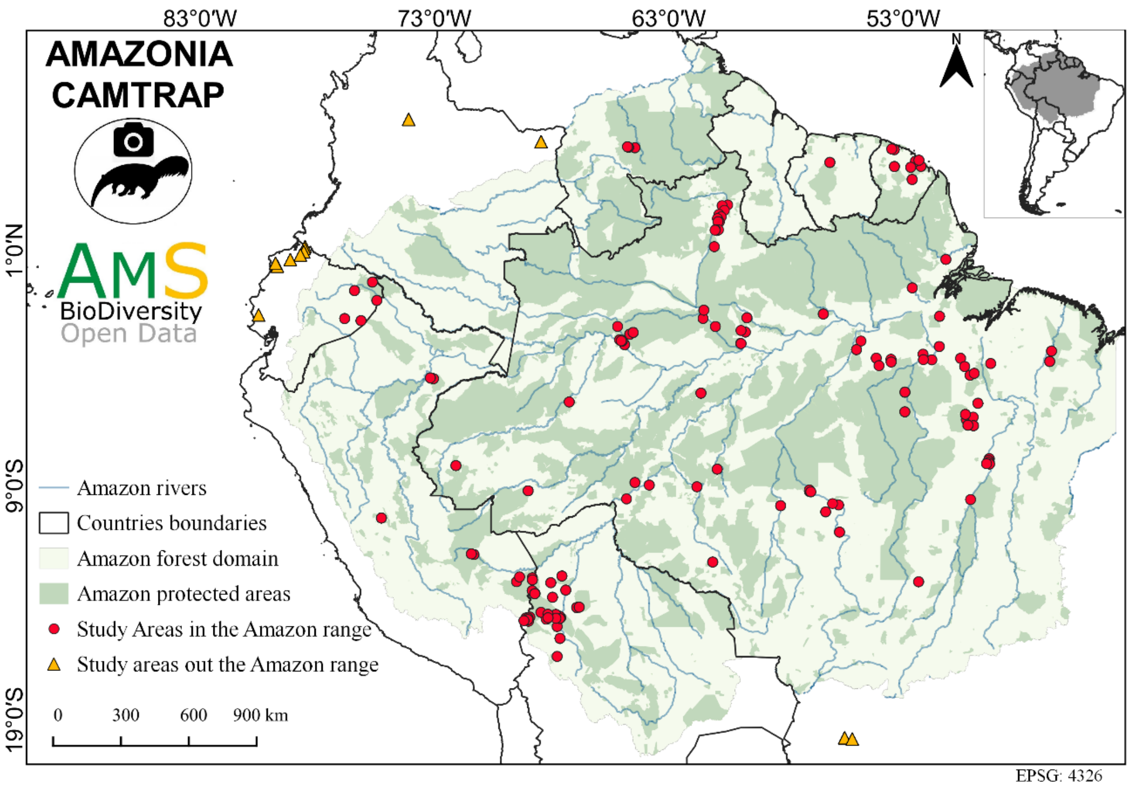

Fig. 1. Distribution of camera trap studies. Red and yellow dots represent study areas within and outside the Amazon Forest limits from this study, respectively. Each red dot represents one study area that englobes multiple sampling units (or camera trap stations).

Considering the filtered dataset, for our analysis, we used data from 42 data sets, 143 study areas, and a total of 122,534 records, from which we identified 289 species (166 birds, 111 mammals and 12 reptiles), from 196 genera, 77 families, and 31 orders (Fig. 2). The most frequent species recorded per taxa were: mammals - *Cuniculus paca* (10,495 records); birds - *Pauxi tuberosa* (3,713 records); reptiles - *Tupinambis teguixin* (708 records). Baits were used in 21% of the data sets. On average, the minimum distance between stations was 1270 ± 714 meters (mean ± SD). The time interval established for determining independent detections varied between studies: 37% of studies used 30 minutes, 15% 1 hour, 6% 24 hours, 22% used both 30 minutes and 24 hours (for *Panthera onca*), 16% used other time intervals, while 4% did not report this criterion. For most studies, the time interval was determined by the ecological question and the species studied (Sollmann 2018). The mean sampling effort among study areas was 2127 traps/days (min 3 – max 18,566), with more intense effort in Central Amazonia. The effort was evaluated by multiplying the number of sampling units by the number of days these units were operational. The number of study sites also varied per country, with 59% of the surveys conducted in Brazil, 25% in Bolivia, 3% in Ecuador, 6% in French Guiana, 4% in Peru, 2% in Venezuela, and 0.6% in Suriname.

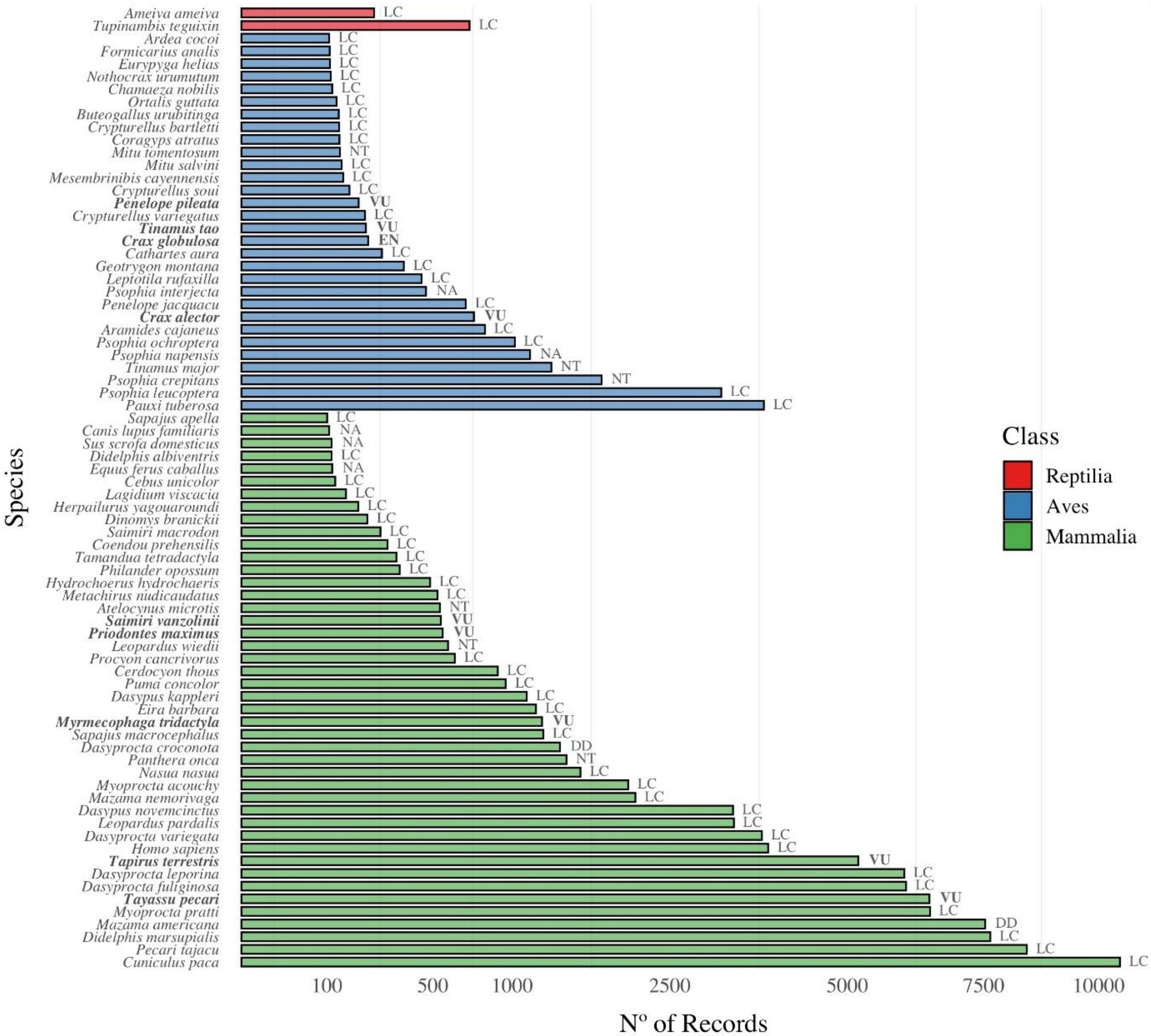

Fig. 2. Number of records of species with more than 100 records. The symbols from the global assessment were: LC = Least Concern, NT = Near Threatened, VU = Vulnerable, EN = Endangered, DD = Data Deficient, NA = Data Not Available. Vulnerable and endangered species are shown in bold.

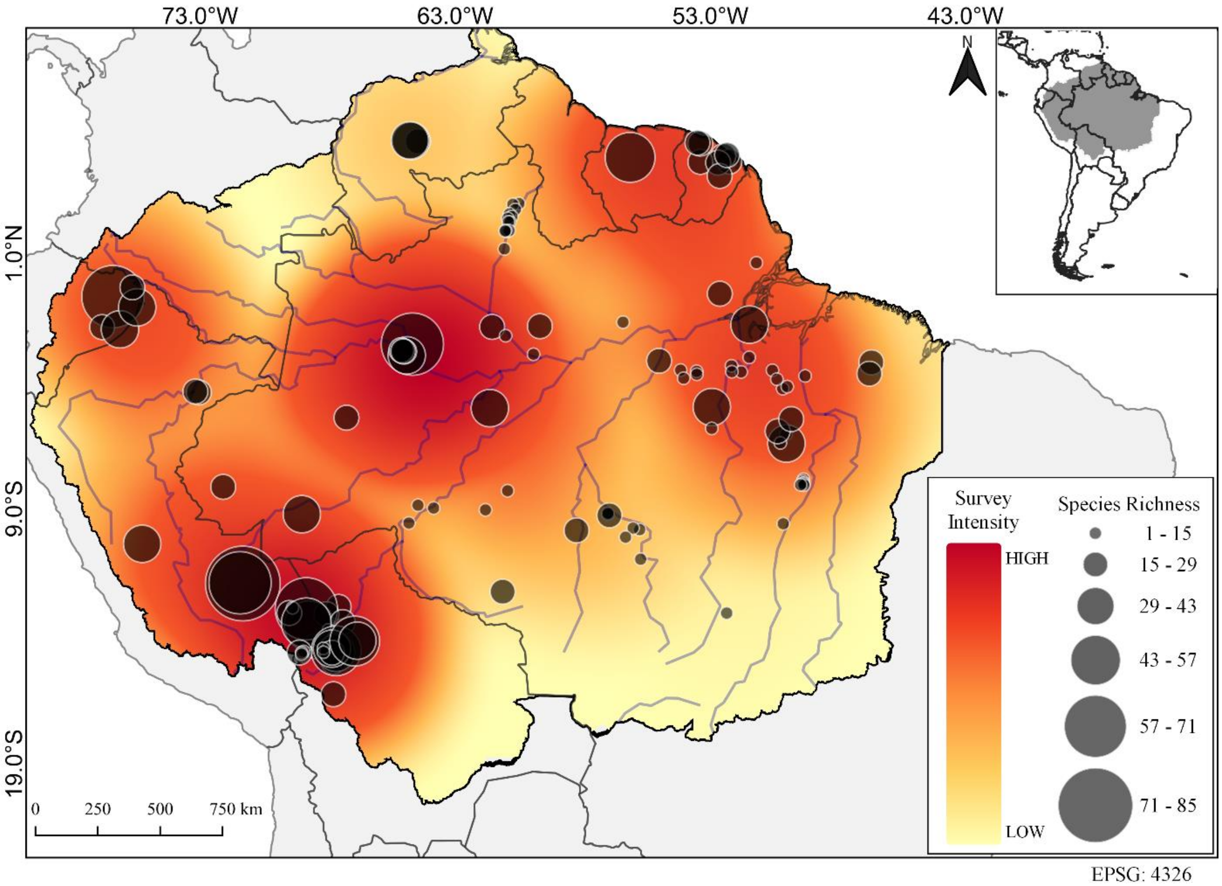

Fig. 3. Species richness and sampling effort per study area. Species richness was higher in areas with more intense sampling effort.

The average detected species richness per site was 18.8 ± 15.6 species (mean ± SD), with the highest recorded richness in southwestern Amazon, between northwestern Bolivia and southeastern Peru (Fig. 3). About 88% of records occurred inside PAs, while the remaining 9% were in non-protected areas. For 3% of the records the information was not specified. Both species richness and sampling effort were higher in Protected Areas with sustainable use of natural resources, when compared to other classes of protected and non-protected areas (Fig. 4). The sampling effort varied widely among and within PA classes: Ia - 1765.3 ± 2655.8 cameras*day (mean ± SD); Ib - 1721.9 ± 3270.9 cameras*day; II - 1579.2 ± 3847.9

cameras*day; V - 2104.8 ± 4356.1 cameras*day; VI - 1660.4 ± 3356.4 cameras*day; NA - 1669.5 ± 2759.8 cameras*day.

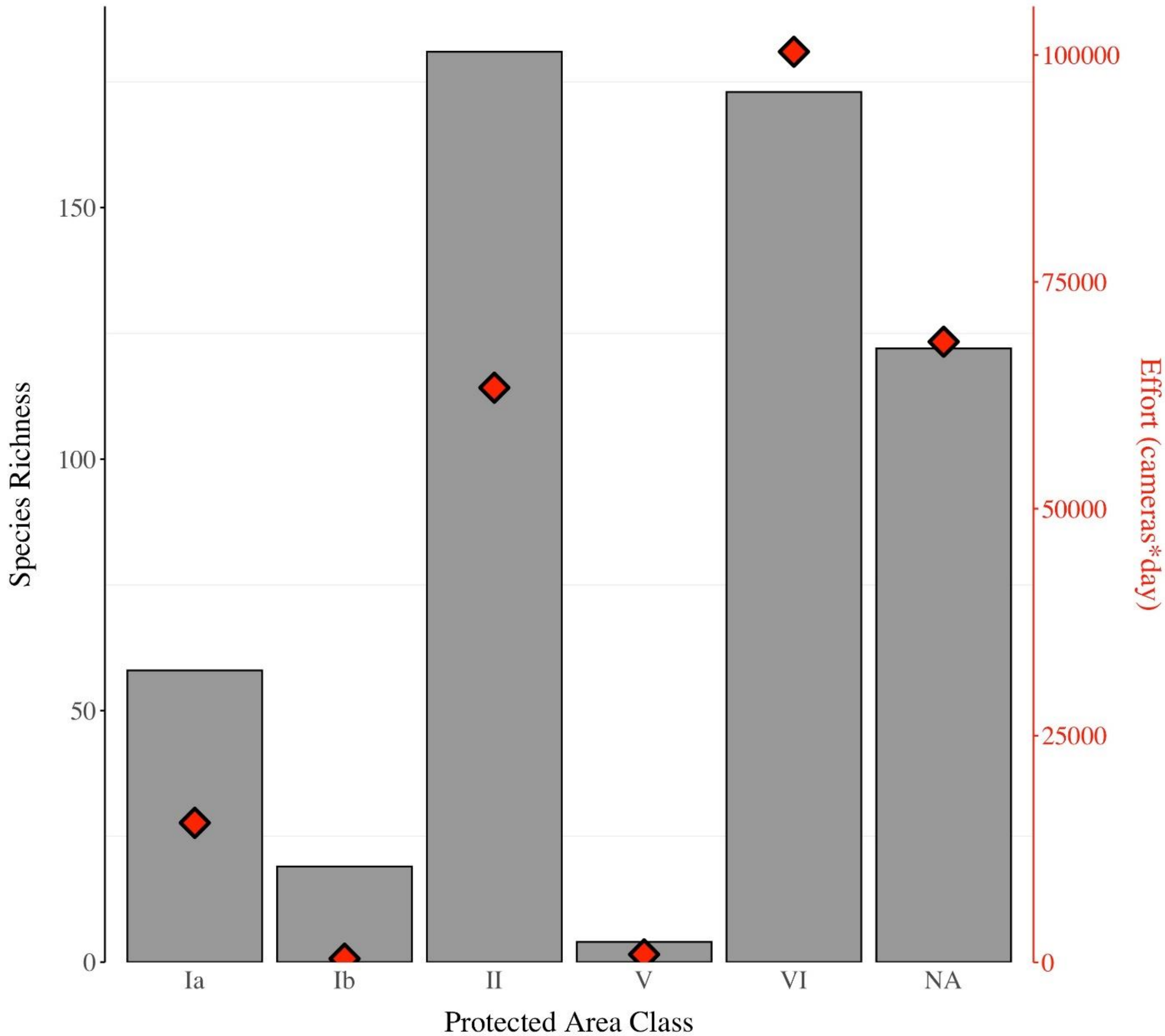

Fig. 4. Species richness (gray bars) and sampling effort (red diamonds) per class of Protected Area. IUCN Protected Area Management Categories were: Ia – Strict Nature Reserve; Ib – Wilderness Area; II – National Park; V – Protected Landscape/Seascape; VI – Protected Area with sustainable use of natural resources; and NA - Non-protected Area (not an IUCN category).

CLASS II – RESEARCH ORIGIN DESCRIPTORS

A. Overall project description

1. Identity

A dataset compilation with information on terrestrial mammals, birds, and reptile species from camera trap records in the Amazon forest.

2. Originators

The AMAZONIA CAMTRAP project was coordinated by Ana Carolina Antunes, Guilherme Costa Alvarenga, Anelise Montanarin, Erison Carlos dos Santos Monteiro, Fernando Ferreira de Pinho and Diogo Maia Gräbin. The following collaborators were part of the support team:

Graphs and statistics: Guilherme Costa Alvarenga, and Fernando Ferreira de Pinho

Dataset standardization: Ana Carolina Antunes, Guilherme Costa Alvarenga, Anelise Montanarin, Erison Carlos dos Santos Monteiro, Diogo Maia Gräbin, and Fernando Ferreira de Pinho

Co-authorship coordination: Anelise Montanarin and Ana Carolina Antunes

Map generations: Fernando Ferreira de Pinho and Ana Carolina Antunes

Manuscript writing: Ana Carolina Antunes, Guilherme Costa Alvarenga, Anelise Montanarin, Erison Carlos dos Santos Monteiro, Diogo Maia Gräbin, Fernando Ferreira de Pinho, Robert B. Wallace, Emiliano Esterci Ramalho, and Milton Cezar Ribeiro.

Species distribution range and taxonomy validation: Daniel Lane, Jean Boubli, Marcélia Basto, Mario Cohn-Haft, Rafael N. Leite, and Ronaldo G. Morato

3. Period of study

Species records range from 2001 to 2020.

4. Objectives

Our main objectives were: (1) To summarize information from camera trap inventories conducted in the Amazon forest, exploring raw, unpublished, and published data; (2) to identify species distribution, richness, the spatial pattern of sampling effort, and knowledge gaps. Therefore, we provide a database with information that can be used in further macroecological studies.

5. Sources of funding

The compilation of this dataset was supported by grants, fellowships, and scholarships from: Amazon Region Protected Areas Program (ARPA); Brazilian National Council for Scientific and Technological Development (CNPq - Grant numbers 150123/2018-3; 142352/2017-9; 201475/2017-0; 441443/2016-8; 441703/2016-0; 307084/2013-2; bolsa PCI-D; processos individuais número 300087/2016-0, 312539/2016-9, 300057/2017-2, 300444/2019-2 e 132510/2019-7); Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES - Grant numbers 88882.184240/2018-01; Doutorado Pleno no Exterior/ nº:88881.128140/2016-01); Darwin Initiative for the Survival of Species (Grant number 20-001); DEAL Guyane (French Ministry of Environment); Dean Amadon Grant from the Raptor Research Foundation; Disney World Conservation Fund; Ecopetrol; EERC University of Salford internal grants; ERDF

Funds; Fundação Grupo Boticário de Proteção à Natureza; Fundação Monsanto; Fundação Pantanal Com Ciência; Fundación Marío Santo Domingo; Idea Wild; Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio); Instituto de Desenvolvimento Sustentável Mamirauá (IDSM); Instituto Nacional de Pesquisas da Amazônia (INPA - FDB/Vale S.A.); Jaguar Conservation Program (Wildlife Conservation Society – WCS); Leme Engenharia; Liz Claiborne Art Ortenberg Small Grant (Panthera Foundation); National Science Foundation (Division of Environmental Biology - Grant number 1146206); Norte Energia; People's Trust for Endangered Species (PTES); Phoenix Herpetological Society; Projeto Conservação de Vertebrados Aquáticos Amazônicos (Aquavert) – Programa Petrobras Ambiental; PROCAD-AM, (Grant number 88881.314420/2019-01); The Explorers Club; The Gordon and Betty Moore Foundation; The International Osprey Foundation Endowment; The Rufford Foundation Small Grants (Grant numbers 12231-1; 16299-1; 20754-1); USAID; Wildlife Research; Woodland Park Zoo; World Wide Fund for Nature (WWF).

B. Specific Subproject description

1. Site Description

The Amazon is the largest rainforest in the world. This study is focused on an area of 8,414,085 km^2 encompassing eight countries: Brazil, Bolivia, Colombia, Ecuador, French Guiana, Peru, Suriname, and Venezuela (RAISG 2020). Dominated by rivers, the Amazon forest mainly consists of lowland plains, however along the frontiers among Venezuela, Brazil, and Guiana, the highlands of Guiana Shield have peaks that can reach up to 3,000 m (Lujan and Armbruster 2011). Rainfall ranges from 1,500 to 3,000 mm annually (Salati and Vose 1984), resulting in extensive seasonally-flooded areas (Junk et al. 2011). Combined with a marked annual flood pulse, the wide range of soil profiles covering the Amazon forest drives vegetation composition and structure (Quesada et al. 2010).

The Amazon forest comprises a complex mosaic of 53 major ecosystems and over 600 different types of land and freshwater habitat (Salati et al. 2012). Most of the Amazon consists of upland forests, or *terra firme* forests, which occur at well-drained sites above the high-water levels (Melack and Hess 2010). Wetlands cover between 14 - 30% of the Amazon basin and result from the heavy annual rainfall, unevenly distributed between seasons, and consequent rising river levels and inundation of adjacent floodplains of up to 230 days per year (Junk et al. 1989, Melack and Hess 2010, Junk et al. 2011).

The physical and chemical parameters of the major Amazonian floodplain rivers characterize the three dominant habitats in these wetlands: the *várzea* forests, flooded by sediment-rich white-water rivers originating in the Andes; the paleo-várzeas formed from ancient Andean sediments and therefore with intermediate fertility; and the *igapós*, associated with nutrient-poor black and clearwater rivers (Prance 1979; Irion et al. 2010; Sioli 1956; Junk et al. 2011). *Campinas* and *campinaranas*, the Amazonian savannahs, are associated with sandy, very nutrient-poor soils, often subject to periodic flooding (Pires and Prance 1985). Other vegetation types are also present and cover small areas, but are quite distinct. Those include mangrove forest, restinga, and swamps (for more details on each vegetation type, see Pires and Prance 1985, Junk et al. 2011).

These ecosystems are interconnected and have different levels of resilience to anthropogenic alterations. In the Amazon Basin, PAs are considered a viable way to conserve biodiversity and reduce deforestation and forest degradation (Sobral-Souza et al. 2018). In, for example, the Brazilian Amazon, PAs cover 2.2 million km^2, with 44% comprised of forests (Verissimo et al. 2011). Nevertheless, PA effectiveness as a conservation tool may vary depending on the type, size, administrative level, and exposure to deforestation (Nogueira et al. 2018). Amazonian deforestation is concentrated mainly in the "arc of deforestation", an area located on its southern and eastern limits, along the Andean piedmont (Malhi et al. 2008). It is estimated that, for the entire Amazon Basin, around 100Gt (gigatons = billion tons) of carbon, as above-ground live biomass, roots, dead trees and soil stocks, could be released into the atmosphere if the forest is converted to non-forest vegetation (Fearnside 2008).

2. Data Compilation

A collaborative network of researchers shared their published and unpublished camera trap data for the Amazon forest. The invitation was open; therefore, we tried to reach every potential collaborator and invited them to contribute and participate as a co-author in the AMAZON CAMTRAP data paper.

3. Research Methods

This data paper is part of the AMAZONIA, NEOTROPICAL, ATLANTIC, and BRAZIL series initiative, which aims to compile information on the biodiversity of these regions, making data available publicly. Until now, the following data papers of these series have been published: NEOTROPICAL – GPS jaguar movements (Morato et al. 2018), Xenarthrans (Santos et al. 2019), Carnivores (Nagy-Reis et al. 2020), Alien mammals (Rosa et al. 2020); BRAZIL: Road kills (Grilo et al. 2018), ATLANTIC: Plant-animal frugivory (Bello et al. 2017), Terrestrial mammals (Lima et al. 2017; Bovendorp et al. 2017; Souza et al. 2019), Bats (Muylaert et al. 2017), Birds (Hasui et al. 2018), Amphibians (Vancine et al. 2018), Frugivorous butterflies

(Santos et al. 2018), Mammal and bird traits (Gonçalves et al. 2018; Rodrigues et al. 2019), Epiphytes (Ramos et al. 2019) and Primates (Culot et al. 2019).

In this data paper, we compiled records of mammals, birds, and reptiles obtained from camera trap records. Most of these records occurred on or near the ground; however, we also included arboreal sampling efforts. The records were subdivided into two-scale categories: sampling unit and study area. For each study area, we used centroid coordinates of each respective sampling units. All the geographic coordinates are expressed in decimal degrees, using the WGS 84 datum. We focused our data paper on the Amazon forest, and the precise limits of which were defined using RAISG 2020. We maintained records from outside the Amazon forest limits in the dataset, but they were not included in the analysis, graphs, and figures. Data was compiled mostly from unpublished data, but also included data from Negrões et al. 2011; Zapata-Ríos and Araguillin 2013; Benchimol and Peres 2015; Campos et al. 2016; Isasi-Catalá et al. 2016; Abrahams, Peres, and Costa 2017, 2018; Aguiar-Silva et al. 2017; Torralvo, Botero-Arias, and Magnusson 2017; Alvarenga et al. 2018; Costa, Peres, and Abrahams 2018; Antunes et al. 2019; Wang et al. 2019; and Rocha et al. 2020.

4. Taxonomic Data

Each collaborator was responsible for identifying the species recorded in the data shared. After we received the data, the verification and standardization used the following steps: first, the Amazon Camtrap Core Team identified errors in species nomenclature and synonymies species, and standardized all names according to IUCN (2020), Catalog of Life (Roskov et al. 2019), Reptile Database (Uetz et al. 2020), and Patton et al. (2015). After this standardization, we generated maps for the distribution of records of each species and sent them for verification by specialists of each taxonomic group (reptiles - Marcélia Bastos; birds - Mario Cohn-Haft and Daniel Lane; primates - Jean Boubli; rodents and marsupials - Rafael Leite; medium and large mammals - Ronaldo Morato). Finally, the specialists evaluated whether records needed double-checking. In positive cases, we asked collaborators for photos or videos of the specific species records. After this double-checking, collaborators were informed of the specialist's conclusion. Taxonomic uncertainties were retained at the genus level or excluded from the dataset.

C. Data Limitations and Potential Enhancements

Our dataset compiles information on mainly terrestrial Amazon mammals, birds, and reptiles. Since each study had a different objective, additional care is required when comparing the data, as the study design may influence the detectability of target species (Meek et al. 2014). It is also necessary to consider the time interval independence and the sampling effort per study, both of which can directly influences the number of records and species richness (Fig. 5). Some studies also used baits, which may bias the detection and number of records of some species (e.g., Rocha et al. 2016). In addition, different camera trap brands and models may influence species detection (Meek et al. 2014).

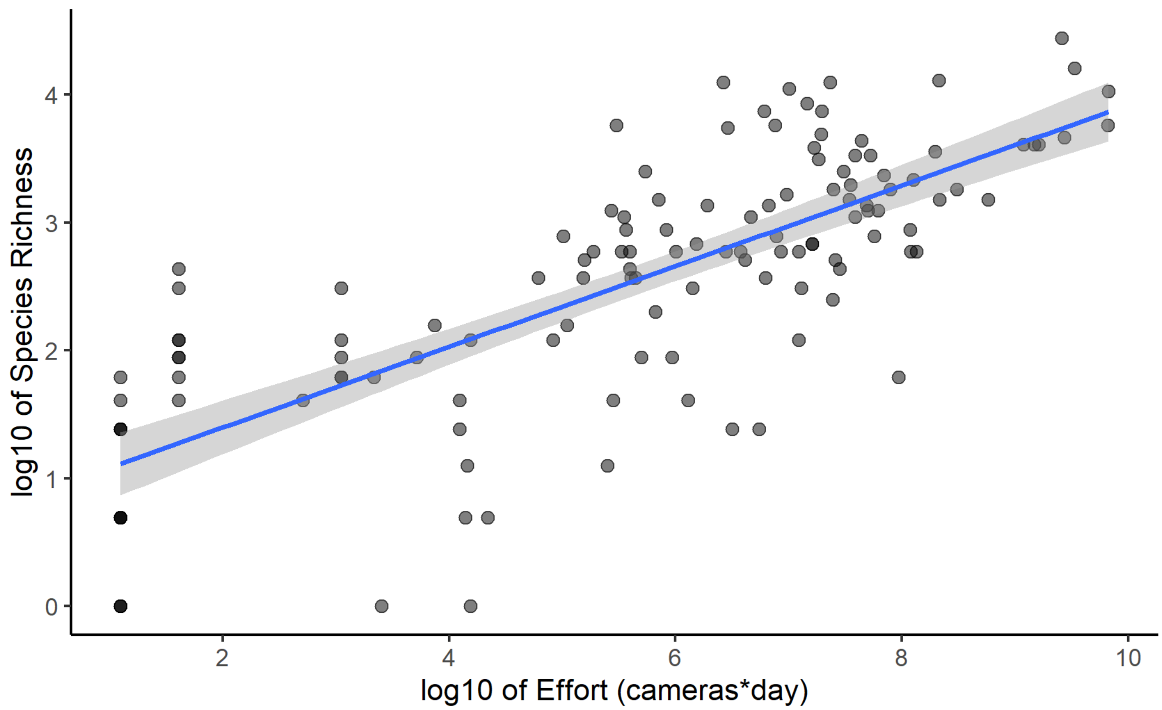

Fig. 5. Positive effect of sampling effort on species richness in the AMAZON-CAMTRAP database. The slope for the effort-richness relationship was 0.32. Gray area represents the 95% confidence interval (0.27-0.36) and each dot represents one study area. Overlapped dots are represented by a darker color. $R^2 = 0.604$, $p < 0.001$.

Spatial and temporal sampling efforts varied considerably across studies and should be considered when using this dataset. While on a local scale, animal trait, camera specifications, and vegetation type might affect animal detection, on a broader scale, it is important to consider processes such as animal density and movement, sampling unit size, number of cameras, and survey duration (Burton et al. 2015). Abundance data should be carefully used and interpreted. It is not recommended to use the number of records as a measure of abundance, doing so only if the study has specified this (e.g., accounting for individual identification) (Burton et al. 2015). We suggest researchers check the “data type” in our data file prior to using data in this manner.

It is also important to highlight that, even though the Amazon Camtrap Core Team and taxon-specific experts checked the taxonomy and distribution of the species involved, species identification was made independently by the groups who collected the data. Finally, we also highlight the variation in sampling effort, as well as the uneven sampling across the different regions of the Amazon. Similarity of species composition is known to decrease with the distance from access infrastructure (Oliveira et al. 2016). This might be an important issue in the Amazon forest since many regions are remote or hard to access, dangerous, logistically challenging or simply too expensive to receive studies. Additionally, local economic and social conflicts can make it highly challenging to conduct scientific activities in some areas.

Notwithstanding these limitations, this study contributes to the large-scale perspective of research into macroecological processes, and helps answer questions related to anthropogenic impacts on Amazonian biodiversity. This data paper represents a massive effort, and has resulted in the compilation of the largest-ever camera trap dataset for the Amazon forest. In doing so, we provide information that was never accessible before, such as reports and non-published data, and explore data on broad spatial and temporal scales.

CLASS III – DATA SET STATUS AND ACCESSIBILITY

A. Status

Latest update: 20/08/ 2021

Latest Archive data: 20/08/ 2021

Metadata Status: Latest update on 20/08/2021 refers to the submitted version of the revision process.

B. Accessibility

Original AMAZONIA CAMTRAP dataset can be accessed on the GitHub Inc. repository (https://github.com/LEEClab/Amazon_camtrap). All the data – both the updated version and complementary material – are fully available for public use and research purposes. The dataset will be updated on a regular basis on the GitHub Inc. repository and the acquisition of new data is possible by contacting the authors of this manuscript.

1. Storage location and medium

The dataset and its future updates can be accessed on the GitHub Inc. repository (https://github.com/LEEClab/Amazon_camtrap) in .CSV format, as well as its metadata. A mirror of this repository will also be available at https://github.com/LEEClab/Amazon_series, where all the other data-papers of AMAZON SERIES are available.

2. Contact people

Ana Carolina Antunes, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Germany and Friedrich-Schiller-University Jena, Germany. E-mail: ana_carolina.antunes@idiv.de

Milton C. Ribeiro, Universidade Estadual Paulista (UNESP), Instituto de Biociências, Departamento de Ecologia, Rio Claro (SP), 13506-900, Brazil. E-mail: miltinho.astronauta@gmail.com

3. Copyright restrictions:

None.

4. Proprietary restrictions

Please cite this data-paper when using its data in publications. We also request that researchers and educators inform us of how they are using this data.

5. Costs:

None.

CLASS IV – DATA STRUCTURAL DESCRIPTORS

A. Data Set File

1. Identity

AMZ_CAMTRAP_AREA.csv

AMZ_CAMTRAP_UNIT.csv

2. Size

1.5 KB

21.7 KB

3. Format and storage mode

Comma-separated values (.csv).

4. Data anomalies

If no information is available for a given record, this is indicated as ‘NA’.

B. Variable Information

Tab Name	Column Abreviation	Column Full Name	Description	Example
All tabs	DATASET	Dataset responsible(s)	Your name and/or team name.	RosaClarissa_LECOM/ UFLA
All tabs	DATA_TEAM	Data owners	Names of data owners.	Rosa, C.; Ribeiro, M.
All tabs	RECORD_ID	Record id	Your own record id.	INV1
All tabs	REFERENCE	Reference	Add complete reference if data has already been published. Otherwise, add "unpublished".	Unpublished
All tabs	TYPE_REF	Reference type	Type of reference (e.g., master’s dissertation, unpublished, etc).	Published peer reviewed
All tabs	DATA_TYPE	Type of data	Record type (Presence-only, Presence-absence, Abundance).	Presence_absence
All tabs	DATA_AIM	Aim of data collection	Please specify if data are "primary" (your study was designed to collect this specific information on this species) or "secondary" (your main objective was not to collect data on this specific species).	Primary
All tabs	SITE	Study site	Name of your study area (e.g., remnant name, protected area, etc).	Serra do Japi
All tabs	AREA_HA	Study area size	Size of study area (total in hectares).	35000
All tabs	MUNICIPALITY	Municipality	Name of the nearest city where the study area is located.	Jundiaí

All tabs	STATE	State	Name of the state/province where the studied area is located.	SP
All tabs	COUNTRY	Country	Name of the country where the studied area is located.	Brazil
Study_area	LONG_X_AREA	Longitude of the study area	Longitude of the study area in decimal degrees (centroid). Use 5 digits if possible.	-46.97554
Study_area	LAT_Y_AREA	Latitude of the study area	Latitude of the study area in decimal degrees (centroid). Use 5 digits if possible.	-23.27613
Sampling_unit	LONG_X_POINT	Longitude of the sampling unit	Longitude of the record in decimal degrees. Use 5 digits if possible.	-46.97554
Sampling_unit	LAT_Y_POINT	Latitude of the sampling unit	Latitude of the record in decimal degrees. Use 5 digits if possble.	-23.27613
Study_area	ALTITUDE	Altitude	Altitude of your sampling unit (i.e., point where species was recorded). If not available, use average altitude of study area.	900
Study_area	ANNUAL_RAIN	Annual rain precipitation	Total annual precipitation for your study area.	1424
Study_area	VEG_LANDUSE_TYPE_AREA	Study area's main vegetation or land cover type	Main vegetation or land cover type of study area.	Semidesciduous forest
Study_area	VEG_LANDUSE_TYPE_AREA_BUFFER5KM	Vegetation or land cover surrounding study area	Vegetation or land cover around your study area (5 km buffer around the entire study area). One or more.	Forest
Sampling_unit	VEG_LANDUSE_TYPE_POINT	Point's vegetation or land cover type	Vegetation or land cover type of your sampling unit (i.e., point where you recorded the species).	Semidesciduous forest
Sampling_unit	VEG_LANDUSE_TYPE_POINT_BUFFER5KM	Vegetation or land cover surrounding sampling unit	Vegetation or land cover around your sampling unit (5 km buffer around the point where data was collected).	Forest
All tabs	PROTECT_AREA	Protected area	Is the sampling unit where you recorded the species located within a protected area? Yes or no.	Yes
All tabs	PROTECT_AREA_TYPE	Type of protected area	If the sampling unit where you recorded the species is located within a protected area, add here the protected area management category according to IUCN: Ia, Ib, II, III, IV,	Ia

			V, VI (Please see guidelines or https://www.iucn.org/theme/protected-areas/about/protected-area-categories).	
All tabs	ORDER	Order	Order of the species.	Carnivora
All tabs	FAMILY	Family	Family of the species.	Felidae
All tabs	GENUS	Genus	Genus of the species.	*Leopardus*
All tabs	SPECIES	Species	Most recent name of the species.	*Leopardus pardalis*
All tabs	COL_START_MO	Data collection start month	Month in which data collection started.	Mar
All tabs	COL_START_YR	Data collection start year	Year in which data collection started.	2015
All tabs	COL_END_MO	Data collection end month	Month in which data collection ended.	Apr
All tabs	COL_END_YR	Data collection end year	Year in which data collection ended.	2017
All tabs	METHOD	Method for data collection	Method used to collect data (Camera trap, Paired Camera trap).	Camera trap
All tabs	CAM_TYPE	Camera type	Camera-trap model used in the study.	Reconyx
All tabs	BAIT	Baiting	Presence or absence of bait.	Yes
All tabs	OCCUR	Occurrence	Occurrence (zero or 1).	1
All tabs	N_RECORDS	Number of records	Number of records (number of photos, number of individuals counted).	4
Study_area	TOTAL_EFFORT	Total sampling effort	Total sampling effort: Camera trap/night.	5000
Sampling_unit	EFFORT	Sampling effort	Sampling effort: Camera trap/night.	120
All tabs	IND_CAM	Independence for camera records	Time interval (in min) for independence between records.	60
All tabs	MIN_DIST_CAM	Minimum distance between cameras	Minimum distance (in m) between camera traps.	2000
All tabs	MAX_DIST_CAM	Maximum distance between cameras	Maximum distance (in m) between camera traps.	3000

All tabs	OBS	Observations	Any important observation that users should know to better understand your data.	NA

Acknowledgments

We would like to thank to Parque Nacional Serra da Bodoquena/ICMBio-MS, Floresta Nacional do Tapajós/ICMBio-PA, Floresta Nacional de Carajás/ICMBio-PA, Área de Relevante Interesse Ecológico PDBFF/ICMBio-AM, Reserva Adolpho Ducke-AM, RESEX Cazumbá-Iracema/ICMBio, the curators and technical team of the Birds and Mammals Collections at INPA, Vandir F. da Silva, José A. Costa Filho, and Tiago G. Junqueira for their help in the field, Dilson E.B. Insfran, Roberto Massafra, Pedro Meloni Nassar, Iury Valente Debien and Ivan Junqueira, for the help with species identifications. We are also grateful to the riverine households, community leaders, and the managers of the Extractive Reserve Riozinho da Liberdade. We would like to thank the communities from Mamirauá sector of the SDR Mamirauá and the communities from Amanã lake of the SDR Amanã, specially, Lázaro, Almir, Socorro, Washington da Silva, Igson, Moisés Leverny, Áquila da Silva e Maria do Carmo. To Instituto de Desenvolvimento Sustentável Mamirauá (IDSM-OS/MCTI), Jairo Silva, André Silva, Erivan Castro, Erinaldo Fragoso. We would like to thank also to Arcadis Logos, Energia Sustentável do Brasil S/A (ESBR), D. Nunes, R.M. Quintino, S.A. Nascimento, E.P. Nascimento, R.L. Pereira, J.M. da Rocha, Grupo AMAGGI, Yasuni Research Station, PUCE, AMCEL (Amapá Florestal e Celulose S.A.), Ibama, ICMBio, Instituto Vida Verde, WCS team and landowners, CNPq (individual proccess nº 300087/2016-0, 312539/2016-9, 308040/2017-1, 300057/2017-2, 300444/2019-2, 306345/2019-6, and 132510/2019-7). PELD/CNPq (nº 441703/2016-0; site TANG), the Max Planck Institute for Biogeochemistry, the Gordon and Betty Moore Foundation (nº 5483), NSF (DEB-1457602), Local Staff Biocev Smart Projects Group, Interligação Elétrica do Madeira S/A (IEMAD), Parque Nacional Campo Amazônicos and Parque Nacional Mapinguari for logistical support. Sébastien Barrioz, Eddy Poirrier Instituto de Pesquisas Cananéia, IPeC “Carbon Sink Project”, Peugeot-Citroën, Office National dês Forêts (ONF-International and ONF-Brasil) for logistic support in the Fazenda São Nicolau (FSN), Parque Nacional do Jaú/ICMBio and communities of Jaú river, AMCEL (Amapá Florestal e Celulose S.A.), Earthwatch volunteers and interns Dr. Rodolfo Jaffé - Vale Institute of Technology Vale S/A. All people involved in the field on the armadillo density study in French Guiana. Benoit de Thoisy for his help with mammal identification, Olivier Claessens for his help with bird identification, and Benoit Villette for his help with amphibia and reptile identification. Daniel Martins, Reginey Gomes, Roberto da Costa, Elenilson Silva, Fernando Costa, Sebastião Gama and Rosilene Gutierrez. To all lovers of Amazon biodiversity and those who believe the world can be better with shared scientific data.

References

Abrahams, Mark I., Carlos A. Peres, and Hugo C.M. Costa. 2017. Measuring local depletion of terrestrial game vertebrates by central-place hunters in rural Amazonia. PLoS ONE 12 (10): 1-25. https://doi.org/10.1371/journal.pone.0186653.

Abrahams, Mark I., Carlos A. Peres, and Hugo C.M. Costa. 2018. Manioc losses by terrestrial vertebrates in western Brazilian Amazonia. Journal of Wildlife Management 82 (4): 734-746. https://doi.org/10.1002/jwmg.21443.

Aguiar-Silva, Francisca Helena, Olivier Jaudoin, Tânia M Sanaiotti, Gláucia H F Seixas, Samuel Duleba, and Frederico D Martins. 2017. "Camera Trapping at Harpy Eagle Nests: Interspecies Interactions Under Predation Risk." *Journal of Raptor Research* 51 (1): 72–78.

Ahumada, Jorge A., Eric Fegraus, Tanya Birch, Nicole Flores, Roland Kays, Timothy G. O'Brien, Jonathan Palmer, et al. 2020. "Wildlife Insights: A Platform to Maximize the Potential of Camera Trap and Other Passive Sensor Wildlife Data for the Planet." *Environmental Conservation* 47 (1): 1–6. https://doi.org/10.1017/S0376892919000298.

Ahumada, Jorge A., Johanna Hurtado, and Diego Lizcano. 2013. "Monitoring the Status and Trends of Tropical Forest Terrestrial Vertebrate Communities from Camera Trap Data: A Tool for Conservation." *PLoS ONE* 8 (9): 6–9. https://doi.org/10.1371/journal.pone.0073707.

Ahumada, Jorge A., Carlos E.F. Silva, Krisna Gajapersad, Chris Hallam, Johanna Hurtado, Emanuel Martin, Alex McWilliam, et al. 2011. "Community Structure and Diversity of Tropical Forest Mammals: Data from a Global Camera Trap Network." *Philosophical*

Transactions of the Royal Society B: Biological Sciences. https://doi.org/10.1098/rstb.2011.0115.

Alvarenga, Guilherme Costa, Emiliano Esterci Ramalho, Fabrício B. Baccaro, Daniel Gomes da Rocha, Jefferson Ferreira-Ferreira, and Paulo Estefano Dineli Bobrowiec. 2018. "Spatial Patterns of Medium and Large Size Mammal Assemblages in Várzea and Terra Firme Forests, Central Amazonia, Brazil." *Plos One* 13 (5): e0198120. https://doi.org/https://doi.org/10.1371/journal.pone.0198120.

Andrade, Maryane B.T., Lucas Ferrante, and Philip M. Fearnside. 2021. "Brazil's Highway BR-319 Demonstrates a Crucial Lack of Environmental Governance in Amazonia." *Environmental Conservation*, 1–4. https://doi.org/10.1017/S0376892921000084.

Antunes, Ana Carolina, Fabrício B. Baccaro, Victor Lery Caetano Andrade, José Ferreira Ramos, Roberto Da Silva Moreira, and Adrian A. Barnett. 2019. "Igapó Seed Patches: A Potentially Key Resource for Terrestrial Vertebrates in a Seasonally Flooded Forest of Central Amazonia." *Biological Journal of the Linnean Society* 128 (2): 460–72. https://doi.org/10.1093/biolinnean/blz101.

ARA, Articulação Regional Amazônica. 2011. *A Amazônia e Os Objetivos de Desenvolvimento Do Milênio*. Edited by Danielle Celentano and Mariana Vedoveto. *ARA Regional*. Quito, Equador.

Azevedo-Ramos, Claudia, and Paulo Moutinho. 2018. "No Man's Land in the Brazilian Amazon: Could Undesignated Public Forests Slow Amazon Deforestation?" *Land Use Policy* 73: 125–27. https://doi.org/10.1016/j.landusepol.2018.01.005.

Bello, Carolina, Mauro Galetti, Denise Montan, Marco A. Pizo, Tatiane C. Mariguela, Laurence Culot, Felipe Bufalo, et al. 2017. “Atlantic Frugivory: A Plant–Frugivore Interaction Data Set for the Atlantic Forest.” *Ecology* 98 (6): 1729. https://doi.org/10.1002/ecy.1818.

Benchimol, Maíra, and Carlos A. Peres. 2015. “Widespread Forest Vertebrate Extinctions Induced by a Mega Hydroelectric Dam in Lowland Amazonia.” *PloS One*, 1–15. https://doi.org/10.5061/dryad.c301h.

Bovendorp, Ricardo S., Nacho Villar, Edson F. de Abreu-Junior, Carolina Bello, André L. Regolin, Alexandre R. Percequillo, and Mauro Galetti. 2017. “Atlantic Small-Mammal: A Dataset of Communities of Rodents and Marsupials of the Atlantic Forests of South America.” *Ecology* 98 (8): 2226. https://doi.org/10.1002/ecy.1893.

Brancalion, Pedro H.S., Danilo R.A. De Almeida, Edson Vidal, Paulo G. Molin, Vanessa E. Sontag, Saulo E.X.F. Souza, and Mark D. Schulze. 2018. “Fake Legal Logging in the Brazilian Amazon.” *Science Advances* 4 (8): 1–8. https://doi.org/10.1126/sciadv.aat1192.

Brockerhoff, Eckehard G., Luc Barbaro, Bastien Castagneyrol, David I. Forrester, Barry Gardiner, José Ramón González-Olabarria, Phil O.B. Lyver, et al. 2017. “Forest Biodiversity, Ecosystem Functioning and the Provision of Ecosystem Services.” *Biodiversity and Conservation* 26 (13): 3005–35. https://doi.org/10.1007/s10531-017-1453-2.

Burton, A. Cole, Eric Neilson, Dario Moreira, Andrew Ladle, Robin Steenweg, Jason T. Fisher, Erin Bayne, and Stan Boutin. 2015. “Wildlife Camera Trapping: A Review and Recommendations for Linking Surveys to Ecological Processes.” *Journal of Applied Ecology* 52 (3): 675–85. https://doi.org/10.1111/1365-2664.12432.

Campos, Z., F. Muniz, A. L.J. Desbiez, and W. E. Magnusson. 2016. “Predation on Eggs of Schneider’s Dwarf Caiman, *Paleosuchus trigonatus* (Schneider, 1807), by Armadillos and Other Predators.” *Journal of Natural History* 50 (25–26): 1543–48. https://doi.org/10.1080/00222933.2016.1155782.

Costa, Hugo C. M., Carlos A. Peres, and Mark I. Abrahams. 2018. “Seasonal dynamics of terrestrial vertebrate abundance between Amazonian flooded and unflooded forests.” *PeerJ* 1-22.

Culot, Laurence, Lucas Augusto Pereira, Ilaria Agostini, Marco Antônio Barreto de Almeida, Rafael Souza Cruz Alves, Izar Aximoff, Alex Bager, et al. 2019. “ATLANTIC-PRIMATES: A Dataset of Communities and Occurrences of Primates in the Atlantic Forests of South America.” *Ecology* 100 (1): 2018–19. https://doi.org/10.1002/ecy.2525.

Escobar, Herton. 2019. “Amazon Fires Clearly Linked to Deforestation, Scientists Say.” *Science* 365 (6456): 853. https://doi.org/10.1126/science.365.6456.853.

Fearnside, Philip M. 2008. “Mudanças Climáticas Globais e a Floresta Amazônica.” *In: Biologia e Mudanças Climáticas No Brasil*, 295.

Fearnside, Philip M. 2017. “Deforestation of the Brazilian Amazon.” Oxford Research Encyclopedia of Environmental Science. https://doi.org/10.1093/acrefore/9780199389414.013.102.

Fearnside, Philip M. 2018. “Brazil’s Amazonian Forest Carbon: The Key to Southern Amazonia’s Significance for Global Climate.” *Regional Environmental Change* 18 (1): 47–61. https://doi.org/10.1007/s10113-016-1007-2.

Feldpausch, T. R., J. Lloyd, S. L. Lewis, R. J.W. Brienen, M. Gloor, A. Monteagudo Mendoza, G. Lopez-Gonzalez, et al. 2012. "Tree Height Integrated into Pantropical Forest Biomass Estimates." *Biogeosciences* 9 (8): 3381–3403. https://doi.org/10.5194/bg-9-3381-2012.

Ferrante, L, and Philip M. Fearnside. 2018. "Amazon Sugar Cane: A Threat to the Forest." Edited by Jennifer Sills. *Science* 359 (6383): 1476–1476. https://doi.org/10.1126/science.aat4208.

Gonçalves, Fernando, Ricardo S. Bovendorp, Gabrielle Beca, Carolina Bello, Raul Costa-Pereira, Renata L. Muylaert, Raisa R. Rodarte, et al. 2018. "ATLANTIC MAMMAL TRAITS: A Data Set of Morphological Traits of Mammals in the Atlantic Forest of South America." *Ecology* 99 (2): 498. https://doi.org/10.1002/ecy.2106.

Goulding, Michael, Ronaldo Barthem, and Efrem Jorge Gondim Ferreira. 2003. *The Smithsonian Atlas of the Amazon*. Smithsonian Books, Washington, USA.

Grilo, Clara, Michely R. Coimbra, Rafaela C. Cerqueira, Priscilla Barbosa, Rubem A.P. Dornas, Larissa O. Gonçalves, Fernanda Z. Teixeira, et al. 2018. "BRAZIL ROAD-KILL: A Data Set of Wildlife Terrestrial Vertebrate Road-Kills." *Ecology* 99 (11): 2625. https://doi.org/10.1002/ecy.2464.

Hasui, Érica, Jean Paul Metzger, Rafael G. Pimentel, Luís Fábio Silveira, Alex A.d.A. Bovo, Alexandre C. Martensen, Alexandre Uezu, et al. 2018. "ATLANTIC BIRDS: A Data Set of Bird Species from the Brazilian Atlantic Forest." *Ecology* 99 (2): 497. https://doi.org/10.1002/ecy.2119.

INPE, Instituto Nacional de Pesquisas Espaciais. 2020. "PRODES: Monitoring Deforestation in the Brazilian Amazon by Satellite." http://www.obt.inpe.br/prodes/. Accessed 19 May 2020.

Irion, Georg, José A. S. N. de Mello, Jáder Morais, Maria T. F. Piedade, Wolfgang J. Junk, and Linda Garming. 2010. "Development of the Amazon Valley during the Middle to Late Quaternary: Sedimentological and Climatological Observations." In *Amazonian Floodplain Forests: Ecophysiology, Biodiversity and Sustainable Management*, edited by Wolfgang J. Junk, Maria T. F. Piedade, Florian Wittmann, Jochen Schöngart, and Pia Parolin, 210:27–42. Ecological Studies. Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-90-481-8725-6.

ISA, Instituto Socioambiental. 2020. *Enclosures and Resistance, Isolated Indigenous Peoples in Brazilian Amazonia*. Edited by Fany Ricardo and M. F. Gongora. 1st ed. São Paulo.

Isasi-Catalá, Emiliana, Julio Acosta, Alejandra Anchante, Guillermo Bianchi, Jhonatan Caro, Nereyda Falconi, Leonardo Maffei, Jorge Luis Martínez, and Isaac Goldstein. 2016. "Modelos de Ocupación Para El Monitoreo de La Efectividad de Estrategias de Conservación Del Área de Conservación Regional Comunal Tamshiyacu Tahuayo - ACRCTT, Loreto - Perú." *Ecología Aplicada* 15 (2): 61–68.

IUCN, International Union for Conservation of Nature. 2020. "The IUCN Red List of Threatened Species." *Version 2020-3*. https://www.iucnredlist.org. Downloaded on 10/05/2020.

Jambari, Asrulsani, Selvadurai Sasidhran, Hazril Rafhan Abdul Halim, Khairul Amirin Mohamed, Adham Ashton-Butt, Alex M. Lechner, and Badrul Azhar. 2019. "Quantifying Species Richness and Composition of Elusive Rainforest Mammals in Taman Negara

National Park, Peninsular Malaysia." *Global Ecology and Conservation* 18: e00607. https://doi.org/10.1016/j.gecco.2019.e00607.

Junk, Wolfgang J., Peter B. Bayley, and Richard E. Sparks. 1989. "The Flood Pulse Concept in River-Floodplain Systems." *Canadian Special Publication of Fisheries and Aquatic Sciences* 106 (1): 110–27. https://doi.org/10.1371/journal.pone.0028909.

Junk, Wolfgang J., Maria Teresa Fernandez Piedade, Jochen Schöngart, Mario Cohn-Haft, J. Marion Adeney, and Florian Wittmann. 2011. "A Classification of Major Naturally-Occurring Amazonian Lowland Wetlands." *Wetlands* 31 (4): 623–40. https://doi.org/10.1007/s13157-011-0190-7.

Lees, Alexander C., Carlos A. Peres, Philip M. Fearnside, Maurício Schneider, and Jansen A. S. Zuannon. 2016. "Hydropower and the Future of Amazonian Biodiversity." *Biodiversity & Conservation* 25 (3): 451–66. https://doi.org/10.1007/s10531-016-1072-3.

Lima, Fernando, Gabrielle Beca, Renata L. Muylaert, Clinton N. Jenkins, Miriam L.L. Perilli, Ana Maria O. Paschoal, Rodrigo L. Massara, et al. 2017. "ATLANTIC-CAMTRAPS: A Dataset of Medium and Large Terrestrial Mammal Communities in the Atlantic Forest of South America." *Ecology* 98 (11): 2979. https://doi.org/10.1002/ecy.1998.

Lovejoy, Thomas E., and Carlos Nobre. 2018. "Amazon Tipping Point." *Science Advances* 4 (2): 1–2. https://doi.org/10.1126/sciadv.aat2340.

Lujan, Nathan, and Jonathan W. Armbruster. 2011. "The Guiana Shield." In *Historical biogeography of Neotropical freshwater fishes*, edited by James S. Albert, and Roberto Reis, 211-222. Univ of California Press, USA.

Maestre, Fernando T., Andrea P. Castillo-Monroy, Matthew A. Bowker, and Raúl Ochoa-Hueso. 2012. “Species Richness Effects on Ecosystem Multifunctionality Depend on Evenness, Composition and Spatial Pattern.” *Journal of Ecology* 100 (2): 317–30. https://doi.org/10.1111/j.1365-2745.2011.01918.x.

Malhi, Yadvinder, J. Timmons Roberts, Richard A. Betts, Timothy J. Killeen, Wenhong Li, and Carlos A. Nobre. 2008. “Climate Change, Deforestation, and the Fate of the Amazon.” *Science* 319 (5860): 169–72. https://doi.org/10.1126/science.1146961.

Maretti, Cláudio C., Juan Carlos Riveros, Robert Hofstede, Denise Oliveira, Sandra Charity, Tarsicio Granizo, Cecília Alvarez, Paula Valdujo and Christian Thompson. 2014. State of the Amazon: Ecological Representation in Protected Areas and Indigenous Territories. WWF Living Amazon (Global) Initiative, Brasília and Quito.

Marco, Paulo De, Sara Villén, Poliana Mendes, Caroline Nóbrega, Lara Cortes, Tiago Castro, and Rodrigo Souza. 2020. “Vulnerability of Cerrado Threatened Mammals: An Integrative Landscape and Climate Modeling Approach.” *Biodiversity and Conservation* 29 (5): 1637–58. https://doi.org/10.1007/s10531-018-1615-x.

Meek, P. D., G. Ballard, A. Claridge, R. Kays, K. Moseby, T. O’Brien, A. O’Connell, et al. 2014. “Recommended Guiding Principles for Reporting on Camera Trapping Research.” *Biodiversity and Conservation* 23 (9): 2321–43. https://doi.org/10.1007/s10531-014-0712-8.

Melack J. M., Hess L. L. 2010. “Remote sensing of the distribution and extent of wetlands in the Amazon basin.” In *Amazonian floodplain forests: ecophysiology, biodiversity and sustainable management*, edited by Wolfgang J. Junk, Maria T.F. Piedade, Florian Wittmann, Jochen Schöngart, Pia Parolin, 43-59. New York: Berlin-Heidelberg: Springer.

Morato, Ronaldo G, Jeffrey J Thompson, Agustin Paviolo, Jesus A La Torre, Fernando Lima, Roy T McBride, Rogerio C Paula, et al. 2018. “Jaguar Movement Database: A GPS-based Movement Dataset of an Apex Predator in the Neotropics.” *Ecology* 99 (7): 1691. https://doi.org/10.1002/ecy.2379.

Moreira-Ramírez, José Fernando, Rafael Reyna-Hurtado, Mircea Hidalgo-Mihart, Eduardo Naranjo, Milton C. Ribeiro, Rony García-Anleu, Melvin Mérida, and Gabriela Ponce-Santzo. 2016. “Importancia de Las Aguadas Para El Pecarí de Labios Blancos (*Tayassu pecari*) En La Selva Maya, Guatemala.” *Therya* 7 (1): 51–64. https://doi.org/10.12933/therya-16-344.

Muylaert, Renata D.L., Richard D. Stevens, Carlos E.L. Esbérard, Marco A.R. Mello, Guilherme S.T. Garbino, Luiz H. Varzinczak, Deborah Faria, et al. 2017. “ATLANTIC BATS: A Data Set of Bat Communities from the Atlantic Forests of South America.” *Ecology* 98 (12): 3227. https://doi.org/10.1002/ecy.2007.

Nagy-Reis, Mariana, Júlia Emi de Faria Oshima, Claudia Zukeran Kanda, Francesca Belem Lopes Palmeira, Fabiano Rodrigues de Melo, Ronaldo Gonçalves Morato, Lilian Bonjorne, et al. 2020. “NEOTROPICAL CARNIVORES: A Data Set on Carnivore Distribution in the Neotropics.” *Ecology* 101 (11): 1–5. https://doi.org/10.1002/ecy.3128.

Negrões, Nuno, Eloy Revilla, Carlos Fonseca, Amadeu M.V.M. Soares, Anah T.A. Jácomo, and Leandro Silveira. 2011. “Private Forest Reserves Can Aid in Preserving the Community of Medium and Large-Sized Vertebrates in the Amazon Arc of Deforestation.” *Biodiversity and Conservation* 20 (3): 505–18. https://doi.org/10.1007/s10531-010-9961-3.

Nogueira, Euler Melo, Aurora Miho Yanai, Sumaia Saldanha de Vasconcelos, Paulo Maurício

Lima de Alencastro Graça, and Philip Martin Fearnside. 2018. “Carbon Stocks and Losses to Deforestation in Protected Areas in Brazilian Amazonia.” *Regional Environmental Change* 18 (1): 261–70. https://doi.org/10.1007/s10113-017-1198-1.

O’Connell, Allan F., James D. Nichols, and K. Ullas Karanth. 2011. *Camera Traps in Animal Ecology*. Edited by Allan F. O’Connell, James D. Nichols, and K. Ullas Karanth. *Camera Traps in Animal Ecology*. Tokyo: Springer Japan. https://doi.org/10.1007/978-4-431-99495-4.

Oliveira, Ubirajara, Adriano Pereira Paglia, Antonio D. Brescovit, Claudio J.B. de Carvalho, Daniel Paiva Silva, Daniella T. Rezende, Felipe Sá Fortes Leite, et al. 2016. “The Strong Influence of Collection Bias on Biodiversity Knowledge Shortfalls of Brazilian Terrestrial Biodiversity.” *Diversity and Distributions* 22 (12): 1232–44. https://doi.org/10.1111/ddi.12489.

Paolucci, Lucas N., Rogério L. Pereira, Ludmila Rattis, Divino V. Silvério, Nubia C.S. Marques, Marcia N. Macedo, and Paulo M. Brando. 2019. “Lowland Tapirs Facilitate Seed Dispersal in Degraded Amazonian Forests.” *Biotropica* 51 (2): 245–52. https://doi.org/10.1111/btp.12627.

Patton, James L., Ulyses F. J. Pardiñas, and Guillermo D’Elía. 2015. *Mammals of South America, Volume 2*. Chicago and London: University of Chicago Press. https://doi.org/10.7208/chicago/9780226169606.001.0001.

Peres, Carlos A., Thaise Emilio, Juliana Schietti, Sylvain J.M. Desmoulière, and Taal Levi. 2016. “Dispersal Limitation Induces Long-Term Biomass Collapse in Overhunted Amazonian Forests.” *Proceedings of the National Academy of Sciences of the United States* *of America* 113 (4): 892–97. https://doi.org/10.1073/pnas.1516525113.

Pires, J. M., and G. T. Prance. 1985. "The Vegetation Types of the Brazilian Amazon." In *Key Environments: Amazonia*, edited by G. T. Prance and Thomas E. Lovejoy, 109–45. Pergamon Press.

Prance, Ghillean T. 1979. "Notes on the Vegetation of Amazonia III. The Terminology of Amazonian Forest Types Subject to Inundation." *Brittonia* 31 (1): 26–38.

Quesada, C. A., J. Lloyd, M. Schwarz, S. Patiño, T. R. Baker, C. Czimczik, N. M. Fyllas, et al. 2010. "Variations in Chemical and Physical Properties of Amazon Forest Soils in Relation to Their Genesis." *Biogeosciences* 7 (5): 1515–41. https://doi.org/10.5194/bg-7-1515-2010.

RAISG, Rede Amazónica de Información Socioambiental Georreferenciada. 2009. "MAPA Amazonía 2009: Áreas Protegidas y Territorios Indígenas." Available in http://raisg. socioambiental.org/. Accessed in September 2020.

RAISG, Rede Amazónica de Información Socioambiental Georreferenciada. 2020. "Amazonía: límite utilizado por RAISG." Available in https://www.amazoniasocioambiental.org/en/maps/. Accessed in September 2020.

Ramos, Flavio Nunes, Sara Ribeiro Mortara, Nathalia Monalisa-Francisco, João Pedro Costa Elias, Luiz Menini Neto, Leandro Freitas, Rodrigo Kersten, et al. 2019. "ATLANTIC EPIPHYTES: A Data Set of Vascular and Non-Vascular Epiphyte Plants and Lichens from the Atlantic Forest." *Ecology* 100 (2): 1–2. https://doi.org/10.1002/ecy.2541.

Regolin, André Luis, Milton Cezar Ribeiro, Felipe Martello, Geruza Leal Melo, Jonas Sponchiado, Luis F.de Castro Campanha, Larissa Sayuri Moreira Sugai, Thiago Sanna

Freire Silva, and Nilton Carlos Cáceres. 2020. “Spatial Heterogeneity and Habitat Configuration Overcome Habitat Composition Influences on Alpha and Beta Mammal Diversity.” *Biotropica* 52 (5): 969–80. https://doi.org/10.1111/btp.12800.

Richards, Peter D., Robert T. Walker, and Eugenio Y. Arima. 2014. “Spatially Complex Land Change: The Indirect Effect of Brazil’s Agricultural Sector on Land Use in Amazonia.” *Global Environmental Change* 29: 1–9. https://doi.org/10.1016/j.gloenvcha.2014.06.011.

Rocha, Daniel G., Emiliano E. Ramalho, and Willian E. Magnusson. 2016. “Baiting for Carnivores Might Negatively Affect Capture Rates of Prey Species in Camera-Trap Studies.” *Journal of Zoology* 300 (3): 205–12. https://doi.org/10.1111/jzo.12372.

Rocha, Daniel G., Katia M.P.M.B. Ferraz, Lucas Gonçalves, Cedric K.W. Tan, Frederico G. Lemos, Carolina Ortiz, Carlos A. Peres, et al. 2020. “Wild dogs at stake: Deforestation threatens the only Amazon endemic canid, the short-eared dog (*Atelocynus microtis*).” *Royal Society Open Science* 7: 190717. http://dx.doi.org/10.1098/rsos.190717

Rodrigues, Rodolpho Credo, Érica Hasui, Julia Camara Assis, João Carlos Castro Pena, Renata L. Muylaert, Vinicius Rodrigues Tonetti, Felipe Martello, et al. 2019. “ATLANTIC BIRD TRAITS: A Data Set of Bird Morphological Traits from the Atlantic Forests of South America.” *Ecology* 100 (6): 1–2. https://doi.org/10.1002/ecy.2647.

Rosa, Clarissa Alves da, Bruno R. Ribeiro, Vanesa Bejarano, Fernando Henrique Puertas, Adriana Bocchiglieri, Adriana Loeser dos Santos Barbosa, Adriano Garcia Chiarello, et al. 2020. “NEOTROPICAL ALIEN MAMMALS: A Data Set of Occurrence and Abundance of Alien Mammals in the Neotropics.” *Ecology* 101 (11): 1–5. https://doi.org/10.1002/ecy.3115.

Roskov, Y., G. Ower, T. Orrell, D. Nicolson, N. Bailly, P. M. Kirk, T. Bourgoin, et al. 2019. “Species 2000 & ITIS Catalogue of Life, 2019 Annual Checklist.” Digital resource at www.catalogueoflife.org/annual-checklist/2019. Species 2000: Naturalis, Leiden, Netherlands.

Salati, Eneas, and Peter B. Vose. 1984. “Amazon Basin: A System in Equilibrium.” *Science* 225 (4658): 129–38. https://doi.org/10.1126/science.225.4658.129.

Salati, Eneas, Marc J. Dourojeanni, Agenor Mundim, Gilvan Sampaio, and Thomas Lovejoy. 2012. “The Brazilian Amazon.” In *Climate and Conservation*, edited by Jody A. Hilty, Charles C. Chester, Molly S. Cross, 45-55. Island Press/Center for Resource Economics.

Santos, Jessie Pereira dos, André Victor Lucci Freitas, Keith Spalding Brown, Junia Yasmin Oliveira Carreira, Patrícia Eyng Gueratto, Augusto Henrique Batista Rosa, Giselle Martins Lourenço, et al. 2018. “Atlantic Butterflies: A Data Set of Fruit-Feeding Butterfly Communities from the Atlantic Forests.” *Ecology* 99 (12): 2875. https://doi.org/10.1002/ecy.2507.

Santos, Paloma Marques, Adriana Bocchiglieri, Adriano Garcia Chiarello, Adriano Pereira Paglia, Adryelle Moreira, Agnis Cristiane de Souza, Agustin Manuel Abba, et al. 2019. “NEOTROPICAL XENARTHRANS: A Data Set of Occurrence of Xenarthran Species in the Neotropics.” *Ecology* 100 (7): 1–4. https://doi.org/10.1002/ecy.2663.

Silva, José Maria Cardoso Da, Anthony B. Rylands, and Gustavo A.B. Da Fonseca. 2005. “The Fate of the Amazonian Areas of Endemism.” *Conservation Biology* 19 (3): 689–94. https://doi.org/10.1111/j.1523-1739.2005.00705.x.

Sioli, H. 1956. “Über Natur Und Mensch Im Brasilianischen Amazonasgebiet.” *Erdkunde* 10 (2): 89–109.

Sobral-Souza, Thadeu, Maurício Humberto Vancine, Milton Cezar Ribeiro, and Matheus S. Lima-Ribeiro. 2018. “Efficiency of Protected Areas in Amazon and Atlantic Forest Conservation: A Spatio-Temporal View.” *Acta Oecologica* 87 (July 2017): 1–7. https://doi.org/10.1016/j.actao.2018.01.001.

Sollmann, Rahel. 2018. “A Gentle Introduction to Camera-Trap Data Analysis.” *African Journal of Ecology* 56 (4): 740–49. https://doi.org/10.1111/aje.12557.

Sonter, Laura J., Diego Herrera, Damian J. Barrett, Gillian L. Galford, Chris J. Moran, and Britaldo S. Soares-Filho. 2017. “Mining Drives Extensive Deforestation in the Brazilian Amazon.” *Nature Communications* 8 (1): 1–7. https://doi.org/10.1038/s41467-017-00557-w.

Souza, Yuri, Fernando Gonçalves, Laís Lautenschlager, Paula Akkawi, Calebe Mendes, Mariana M. Carvalho, Ricardo S. Bovendorp, et al. 2019. “ATLANTIC MAMMALS: A Data Set of Assemblages of Medium- and Large-Sized Mammals of the Atlantic Forest of South America.” *Ecology* 100 (10). https://doi.org/10.1002/ecy.2785.

Steege, Hans ter, Paulo I. Prado, Renato A.F.de Lima, Edwin Pos, Luiz de Souza Coelho, Diogenes de Andrade Lima Filho, Rafael P. Salomão, et al. 2020. “Biased-Corrected Richness Estimates for the Amazonian Tree Flora.” *Scientific Reports* 10 (1): 1–13. https://doi.org/10.1038/s41598-020-66686-3.

Steenweg, Robin, Mark Hebblewhite, Roland Kays, Jorge Ahumada, Jason T. Fisher, Cole

Burton, Susan E. Townsend, et al. 2017. “Scaling-up Camera Traps: Monitoring the Planet’s Biodiversity with Networks of Remote Sensors.” *Frontiers in Ecology and the Environment* 15 (1): 26–34. https://doi.org/10.1002/fee.1448.

Strand, Jon, Britaldo Soares-Filho, Marcos Heil Costa, Ubirajara Oliveira, Sonia Carvalho Ribeiro, Gabrielle Ferreira Pires, Aline Oliveira, et al. 2018. “Spatially Explicit Valuation of the Brazilian Amazon Forest’s Ecosystem Services.” *Nature Sustainability* 1 (11): 657–64. https://doi.org/10.1038/s41893-018-0175-0.

Terborgh, J., L. Lopez, P. V. Nuñez, M. Rao, G. Shahabuddin, G. Orihuela, M. Riveros, et al. 2001. “Ecological Meltdown in Predator-Free Forest Fragments.” *Science* 294 (5548): 1923–26. https://doi.org/10.1126/science.1064397.

Torralvo, Kelly, Robinson Botero-Arias, and Willian E. Magnusson. 2017. “Temporal variation in black-caiman-nest predation in varzea of central Brazilian amazonia.” *PLoS ONE* 12 (8): 1–10. https://doi.org/10.1371/journal.pone.0183476.

Uetz, Peter, Alex Slavenko, Shai Meiri, and Matthew Heinicke. 2020. “Gecko Diversity: A History of Global Discovery.” *Israel Journal of Ecology and Evolution* 66 (3): 117–25. https://doi.org/10.1163/22244662-bja10003.

Vancine, Maurício Humberto, Kauã da Silva Duarte, Yuri Silva de Souza, João Gabriel Ribeiro Giovanelli, Paulo Mateus Martins-Sobrinho, Ariel López, Rafael Parelli Bovo, et al. 2018. “ATLANTIC AMPHIBIANS: A Data Set of Amphibian Communities from the Atlantic Forests of South America.” *Ecology* 99 (7): 1692. https://doi.org/10.1002/ecy.2392.

Venticinque, Eduardo, Bruce Forsberg, Ronaldo Barthem, Paulo Petry, Laura Hess, Armando

Mercado, Carlos Cañas, Mariana Montoya, Carlos Durigan, and Michael Goulding. 2016. "An Explicit GIS-Based River Basin Framework for Aquatic Ecosystem Conservation in the Amazon." *Earth System Science Data* 8 (2): 651–61. https://doi.org/10.5194/essd-8-651-2016.

Verissimo, Adalberto, Alicia Rolla, Mariana Vedoveto, and Silvia de Melo Fustada. 2011. "Protected Areas in the Brazilian Amazon: Challenges and Opportunities." *Imazon*, 96. http://www.bibliotecadigital.abong.org.br/bitstream/handle/11465/1216/10381.pdf?sequence=1.

Wang, Bingxin, Daniel G. Rocha, Mark I. Abrahams, André P. Antunes, Hugo C. M. Costa, André L. S. Gonçalves, Wilson R. Spironello, et al. 2019. "Habitat use of the ocelot (*Leopardus pardalis*) in Brazilian Amazon." *Ecology and Evolution* 9 (9): 5049–5062.

Zapata-Ríos, Galo, and Edison Araguillin. 2013. "Estado de Conservación Del Jaguar y El Pecarí de Labio Blanco En El Ecuador Occidental Conservation Status of the Jaguar and the White-Lipped Peccary in Western Ecuador Resumen Introducción Metodología." *Review Biodiversity Neotropical* 3 (1): 21–29.