

Received Date: 21-Oct-2016  
Revised Date: 12-Feb-2017  
Accepted Date: 24-Feb-2017  
Article Type: Data Papers

## ATLANTIC-FRUGIVORY: A PLANT-FRUGIVORE INTERACTION DATASET FOR THE ATLANTIC FOREST

Carolina Bello<sup>1,5\*</sup>, Mauro Galetti<sup>1,6</sup>, Denise Montan<sup>1</sup>, Marco A. Pizo<sup>2</sup>, Tatiane C. Mariguela<sup>1</sup>, Laurence Culot<sup>2</sup>, Felipe Bufalo<sup>2</sup>, Fabio Labecca<sup>1</sup>, Felipe Pedrosa<sup>1</sup>, Rafaela Constantini<sup>1</sup>, Carine Emer<sup>1</sup>, Wesley R. Silva<sup>3</sup>, Fernanda R. da Silva<sup>4</sup>, Otso Ovaskainen<sup>5,7</sup> and Pedro Jordano<sup>8</sup>

<sup>1</sup> Departamento de Ecologia. Universidade Estadual Paulista (UNESP), Rio Claro, São Paulo, 13506-900, Brazil.

<sup>2</sup> Departamento de Zoologia. Universidade Estadual Paulista, Rio Claro, São Paulo, 13506-900, Brazil

<sup>3</sup> Departamento de Biologia Animal. Instituto de Biologia .UNICAMP, 13083-862 Campinas, Brazil

<sup>4</sup> Departamento de Biologia Vegeta. UNICAMP, 13083-862 Campinas, Brazil

<sup>5</sup> Department of Biosciences. University of Helsinki, P.O. Box 65, FI-00014, Finland

<sup>6</sup> Department of Bioscience - Ecoinformatics and Biodiversity Aarhus University, Ny Munkegade 116 building 1540, 8000 Aarhus C, Denmark

<sup>7</sup> Centre for Biodiversity Dynamics, Department of Biology. Norwegian University of Science and Technology. N-7491 Trondheim, Norway.

<sup>8</sup> Integrative Ecology Group. Estación Biológica de Doñana, EBD-CSIC, Av. Americo Vespucio 26, Isla de La Cartuja, 41092 Sevilla, Spain

### Abstract.

The dataset provided here includes 8320 frugivory interactions (records of pairwise interactions between plant and frugivore species) reported for the Atlantic Forest. The dataset includes interactions between 331 vertebrate species (232 birds, 90 mammals, five fishes, one amphibian and three reptiles) and 788 plant species. We also present information on traits directly related to the frugivory process (endozoochory), such as the size of fruits and seeds and the body mass and gape size of frugivores. Data were extracted from 166 published and unpublished sources spanning from 1961 to 2016. While this is probably the most comprehensive dataset available for a tropical ecosystem, it is arguably taxonomically and geographically biased. The plant families better represented are Melastomataceae, Myrtaceae, Moraceae, Urticaceae and Solanaceae. *Myrsine coriacea*, *Alchornea glandulosa*, *Cecropia pachystachya*, and *Trema micrantha* are the plant species with the most animal dispersers (83, 76, 76 and 74 species, respectively). Among the animal taxa, the highest number of interactions is reported for birds (3883), followed by mammals (1315). The woolly spider

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1002/ecy.1818

This article is protected by copyright. All rights reserved.

Accepted Article

monkey or muriqui, *Brachyteles arachnoides*, and rufous-bellied thrush, *Turdus rufiventris*, are the frugivores with the most diverse fruit diets (137 and 121 plants species, respectively). The most important general patterns that we note are that larger seeded plant species (>12 mm) are mainly eaten by terrestrial mammals (rodents, ungulates, primates and carnivores) and that birds are the main consumers of fruits with a high concentration of lipids. Our dataset is geographically biased, with most interactions recorded for the southeast Atlantic Forest.

*Key words: Frugivory, Atlantic Forest, Plant-animal interaction, Fruit traits, Seed dispersal, Frugivores, Mutualism, Network.*

The complete data set is available online at: [*to be completed at proof stage*].

Corresponding Editor: William K. Michener

\* Corresponding Author. E-mail: *caro.bello58@gmail.com*