TEAM Vegetation Monitoring Protocol Metadata

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5) *Acknowledgment.* The Data User agrees to include the following acknowledgment in any publications where the Data Set contributed significantly to its content:

"Data were provided by the TEAM Network of Conservation International, funded by the Gordon and Betty Moore Foundation."

In addition, the Data User agrees to include any additional acknowledgment of institutional support or specific funding awards provided in the metadata accompanying this Data Set in any publications where the Data Set contributes significantly to its content.

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General Information

Vegetation - Trees & Lianas Metadata Version 1.4. This is a Metadata File (**Vegetation - Trees & Lianas-Metadata.1.4.pdf**) for the TEAM Vegetation - Trees & Lianas Monitoring Protocol data. Data are available for download at the TEAM Network website (www.teamnetwork.org). The purpose of this Metadata File is to provide the data user with more information to help them understand and utilize the data sets they download. Suggestions on improving the format of the Metadata File and the query output format can be sent to teamnetworkdata@conservation.org.

Abstract

The Tropical Ecology, Assessment and Monitoring (TEAM) Network is a program in the Center for Applied Biodiversity Science (CABS) at Conservation International (CI). The TEAM Network's mission is to monitor long-term trends in biodiversity through a network of tropical field stations, providing an early warning system on the status of biodiversity that can effectively guide conservation action. The TEAM Network conducts research through a global network of field stations in tropical and sub-tropical forests using a standardized methodology. To study trees the TEAM Network will focus on both, trees assessment and monitoring. The assessment will be part of the whole vegetation assessment that primarily addresses differences among sites within a region or across regions. Sampling will be conducted in both tropical and subtropical forested regions, focusing on the following points: (1) Difference of forest biomass among forests, (2) Difference of forest structure, growth and turnover among forests and (3) Difference of forest community composition among different forests. Monitoring will be concerned with trends and fluctuations over time within sites, looking for correlation between the indicators and local process (human disturbance) as well as global processes (atmospheric and climate trends and fluctuations). Monitoring will focus on how do these vegetation variables change over time: Forest structure, growth, turnover, phenology, and community composition.

Keywords

Aboveground Biomass
Forest Structure
Forest Dynamics and Turnover
Phenology
Community Composition

TEAM Network Partner Institutions

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Geographic Coverage:

The TEAM Vegetation Monitoring Protocol (www.teamnetwork.org) describes the spatial arrangement for Trees observation areas. Individual Tree latitude and longitudes (Datum: WGS84) are in the actual Tree query output data. These measurements are generated analytically from the locations of the 1ha plot corners. The latitude and longitude coordinates (Datum: WGS84) for 1ha plots at each TEAM Site are listed below. The "Name" column is the name of the 1ha plot and has a two letter code for the TEAM Site, "1ha" for the 1ha plot and a unique number. The BlockPosition column defines a particular corner of the 1ha plot (e.g 1HA_0_0 is the origin corner of the 1ha plot). These are further defined in the Vegetation Protocol. The Collection Date refers to when the Longitude and Latitude were collected. Method refers to if these coordinates were "Collected" (i.e. taken using a GPS) or if they were "Derived" using high resolution satellite imagery. Please note that if these coordinates were "Derived" they are only estimates and may have spatial inaccuracies. These coordinates will be updated in the very near future.

Caxiuanã TEAM Site

Name	BlockPosition	Longitude	Latitude	CollectionDate	Method
BLK-CAX-1	T1_000	-51.4637336915427	-1.7110560915138	--	Derived
BLK-CAX-1	T1_1000	-51.4637315249325	-1.7020091842938	--	Derived
BLK-CAX-1	T11_1000	-51.4547411575363	-1.7020113376849	--	Derived
BLK-CAX-1	T11_0000	-51.4547432821568	-1.711058256396	--	Derived
BLK-CAX-2	T1_000	-51.4923440233695	-1.7401631923867	--	Derived
BLK-CAX-2	T1_1000	-51.4916681966155	-1.7311271636628	--	Derived

BLK-CAX-2	T1_1000	-51.4916681966155	-1.7311271636628	--	Derived
BLK-CAX-2	T11_1000	-51.4826860982276	-1.7317127120575	--	Derived
BLK-CAX-2	T11_0000	-51.4834305994463	-1.7406866191957	--	Derived
BLK-CAX-3	T1_000	-51.504501544065	-1.7358036975612	--	Derived
BLK-CAX-3	T1_1000	-51.5125479767056	-1.7396159152413	--	Derived
BLK-CAX-3	T11_1000	-51.5160269076807	-1.731285574251	--	Derived
BLK-CAX-3	T11_0000	-51.5079031325797	-1.7273955385744	--	Derived
BLK-CAX-4	T1_000	-51.5224801113834	-1.7605396350865	--	Derived
BLK-CAX-4	T1_1000	-51.5287470560801	-1.7540793902681	--	Derived
BLK-CAX-4	T11_1000	-51.5219605845073	-1.748175314708	--	Derived
BLK-CAX-4	T11_0000	-51.5156939961172	-1.7545555341397	--	Derived
BLK-CAX-5	T1_000	-51.5875961480295	-1.7864807788446	--	Derived
BLK-CAX-5	T1_1000	-51.5966379244866	-1.7864566186838	--	Derived
BLK-CAX-5	T11_1000	-51.5966350190846	-1.7774270782128	--	Derived
BLK-CAX-5	T11_0000	-51.5875723231804	-1.7774170342379	--	Derived
BLK-CAX-6	T1_000	-51.4274713639035	-1.7309914556961	--	Derived
BLK-CAX-6	T1_1000	-51.436022685043	-1.7271646762742	--	Derived
BLK-CAX-6	T11_1000	-51.4321767920712	-1.7194724493536	--	Derived
BLK-CAX-6	T11_0000	-51.4238413284395	-1.7227341254148	--	Derived
Manaus TEAM Site					
BLK-MA-1	T1_000	-59.9519648242	-2.92547049287	--	Collected
BLK-MA-1	T1_1000	-59.9430468144	-2.92415685655	--	Collected
BLK-MA-1	T11_1000	-59.941721852	-2.93296960825	--	Collected
BLK-MA-1	T11_0000	-59.9505950189	-2.93428330487	--	Collected
BLK-MA-2	T1_000	-59.9093980882	-2.96462426388	--	Collected
BLK-MA-2	T1_1000	-59.90051512	-2.96321106388	--	Collected
BLK-MA-2	T11_1000	-59.8990993085	-2.97169910304	--	Collected
BLK-MA-2	T11_0000	-59.9080183368	-2.97312118916	--	Collected
BLK-MA-3	T1_000	-59.896250192	-2.40420302424	--	Collected
BLK-MA-3	T1_1000	-59.8993854873	-2.41278912152	--	Collected
BLK-MA-3	T11_1000	-59.9077603316	-2.40978943015	--	Collected
BLK-MA-3	T11_0000	-59.9047775942	-2.40113079738	--	Collected
BLK-MA-4	T1_000	-59.79429189072	-2.43697485653	--	Collected
BLK-MA-4	T1_1000	-59.8006665509	-2.43067226275	--	Collected
BLK-MA-4	T11_1000	-59.79426600355	-2.42439629764	--	Collected
BLK-MA-4	T11_0000	-59.78781936506	-2.43068093833	--	Collected
BLK-MA-5	T1_000	-60.2063552292	-2.61379237898	--	Collected
BLK-MA-5	T1_1000	-60.2152510362	-2.61525991138	--	Collected
BLK-MA-5	T11_1000	-60.2137472968	-2.62434181098	--	Collected
BLK-MA-5	T11_0000	-60.2047341756	-2.62269398857	--	Collected
BLK-MA-6	T1_000	-60.1112601076	-2.59220752807	--	Collected
BLK-MA-6	T1_1000	-60.1032295176	-2.59584088768	--	Collected
BLK-MA-6	T11_1000	-60.1072733952	-2.60386193539	--	Collected
BLK-MA-6	T11_0000	-60.1149717663	-2.60029256386	--	Collected

Volcán Barva TEAM Site

BLK-VB-1	T1_000	-84.021053	10.422509	--	Collected
BLK-VB-1	T1_1000	-84.013555	10.417353	--	Collected
BLK-VB-1	T11_1000	-84.018828	10.409931	--	Collected
BLK-VB-1	T11_0000	-84.026406	10.415168	--	Collected
BLK-VB-2	T1_000	-84.039066	10.410673	--	Collected
BLK-VB-2	T1_1000	-84.032683	10.404235	--	Collected
BLK-VB-2	T11_1000	-84.039225	10.397898	--	Collected
BLK-VB-2	T11_0000	-84.045588	10.404336	--	Collected
BLK-VB-3	T1_000	-84.0532006924	10.3129122854	--	Collected
BLK-VB-3	T1_1000	-84.053277489	10.3219704057	--	Collected
BLK-VB-3	T11_1000	-84.044157597	10.3220118515	--	Collected
BLK-VB-3	T11_0000	-84.044112972	10.3129783887	--	Collected
BLK-VB-4	T1_000	-84.053794877	10.3402312722	--	Collected
BLK-VB-4	T1_1000	-84.0628382578	10.341566312	--	Collected
BLK-VB-4	T11_1000	-84.0614831	10.3505111934	--	Collected
BLK-VB-4	T11_0000	-84.0524447796	10.3491827091	--	Collected

Temporal Coverage

The temporal period for the TEAM Network Avian Data Set is described below. This is the maximum temporal range. TEAM Site specific temporal ranges can be determined directly from the data.

Begin:	2002-11-13
End:	2008-11-09

Methods Information

DATA COLLECTION
One (1) ha plots The one (1) ha plot, a 100m by 100m square lot, is a permanent long-term monitoring vegetation plot. The one ha plots are part of the TEAM standardized protocol and serve to monitor aboveground biomass, forest growth and dynamics, forest structure and composition. A summarized description of the steps followed to study vegetation in the 1 ha plots are: 1. Randomly locate the 1 ha plot within the designated research areas. 2. Establishment of the 1 ha plot. 3. First census of all trees 10cm or greater and lianas within the 1 ha plots. 4. Collection of voucher specimens. 5. Re-census of the 1 ha plot (calibrate the diameter measurer and add the new recruits). A detailed methodology is described in the Vegetation Monitoring Protocol that can be found at: http:www.teamnetwork.org

DATA RECORDING
The following forms have been designed to collect field data: 1. First census 2. New recruits 3. Re-census 4. Moving the POM The forms can be found at the TEAM Network site: http:www.teamnetwork.org Field station herbaria are used as repository for voucher specimens from the TEAM protocol plots.

DATA MANAGEMENT

Refer to the "Data Management Protocol" and the "TEAM Monitoring Vegetation Protocol" for data management topics related to the TEAM Vegetation Protocol.

Tree Data Attribute Information			
Attribute Value	**Definition**	**Data Type**	**Example**
ID	Unique number to identify each data record in the database. This number provides a unique identifier for each record but is not necessarily sequential and should not be used for maintaining records across database versions.	numeric	55
Site Name	Name of TEAM site.	string	Volcan Barva
Observation Date	Date of tree observation. {YYYY-MM-DD}	date	2002-11-13
Latitude	Latitude of the tree in decimal degrees.	time	1.78459044
Longitude	Longitude of tree in decimal degrees.	numeric	-51.58924692
Spatial Method	Indicates whether the latitude and Longitude were collected via GPS (Collected) or were derived (Derived) analytically from the Block corner coordinates. {Collected, Derived}	numeric	Derived
Sampling Unit Name	Unique code to identify the tree (Protocol-Site-Block-TreeNumber). Note that Sampling Unit Names with a two digit decimal denote trees that have multiple stems. (e.g. VT-CX-1-3.01, VT-CX-1-3.02, etc).	string	VT-CX-6-001
Family	Tree systematics.	string	Annon
Genus	Tree systematics.	string	Bocageopsis
Species	Tree systematics.	string	NA
Names of Collectors	Name of the person who collected the information in the field.	string	S de Almeida
Diameter	Tree diameter measurement. {cm} Data collected in Vegetation Protocol Version 1.3 do not meet these standards.	numeric	11.5
POM Height	Height at which the Diameter measurement was taken. {m} Data collected in Vegetation Protocol Version 1.3 do not meet these standards.	numeric	1.3
New Diameter	The new DBH associated with a new POM Height {cm} Data collected in Vegetation Protocol Version 1.3 do not meet these standards.	numeric	10.85
New POM Height	A new POM Height is needed if the POM the previous census is no longer appropriate. {m} Data collected in Vegetation Protocol Version 1.3 do not meet these standards.	numeric	1.85
Condition Codes	Codes describing the tree and measurement observation: B: Buttresses C: Stilt Roots D: Damaged or Deformed E: Estimated Diameter F: Fluted G: Prostrate H: Branched Trunk I: Uprooted J: Inclined K: Dead	string	J,B

	L: Ladder Used N: Trunk with Regrowth O: Broken at the Base P: Broken at the Trunk R: Partial Crown Loss S: Missing Bark T: Tree Dying U: Tree re-measured V: Current Measurement Less Than Last Year Data collected in Vegetation Protocol Version 1.3 do not meet these standards.		
Comments	Any comments on the observation or identification.	string	Parts of tree collected for identification
1ha Plot Number	Number of the 1 ha plot.	numeric	6
Subplot Number	Number of the subplot.	numeric	10
Plot X Coordinate	Point of intersection {in the X axis} where the tree was observed in the 1ha plot. {m}	numeric	2.95
Plot Y Coordinate	Point of intersection (in the Y axis) where the tree was observed in the 1ha plot. {m}	numeric	2.81
Tree Number	Unique tree identification number.	numeric	1
Sampling Period	There is 1 Sampling Periods in a calendar year for the Tree/Liana Protocol. The Sampling Periods are the year sampling occurred plus the number of the sampling period. For the first Sampling Period in 2007 the Sampling Period is "2007.01".	numeric	2007.01
Protocol Version	Name and number of the protocol used during the capture.	string	Vegetation Protocol 1.3
Responsible Institution	Name of the partner institution.	string	Museu Paraense Emílio Goeldi
Protocol Lead Scientist	Name of the person responsible of the tree protocol in the TEAM site.	string	Samuel de Almeida
Protocol Lead Scientist Institution	Name of the institution where the Protocol Lead Scientist is affiliated.	string	Museu Paraense Emílio Goeldi