**Mapa

El contenido generado por IA puede ser incorrecto.**

**MSG 1.** Localización del área de estudio y ubicación de parcelas de bosque seco y bosque montano en los municipios de Molagavita y Enciso (Santander), Colombia.

**SMG 1.** Location of the study area and location of dry forest and montane forest plots in the municipalities of Molagavita and Enciso (Santander), Colombia.

**A comparison of the same model

AI-generated content may be incorrect.**

**MSG 2.** Análisis de componentes principales (ACP) y coeficientes entre las variables de estudio en bosque montano y bosque seco, excluyendo las variables relacionadas a epífitas vasculares. DAP (Diámetro a la altura del pecho), H (Altura total del forófito), AC (Área de copa), DP (Densidad de árboles de la parcela), RAC (Riqueza de árboles en el cuadrante).

**SMG 2.** Principal component analysis (PCA) and coefficients between the study variables in montane forest and dry forest, excluding variables related to vascular epiphytes. DAP (Diameter at breast height), H (Total phorophyte height), AC (Crown area), DP (Tree density in the plot), RAC (Tree richness in the quadrant).

A graph of different types of data

AI-generated content may be incorrect.

**MSG 3.** Curvas de rarefacción para el muestreo de epífitas vasculares en las áreas de estudio de bosque seco y bosque montano.

**SMG 3.** Rarefaction curves for sampling vascular epiphytes in the study areas of dry forest and montane forest.

**Gráfico, Gráfico de cajas y bigotes

El contenido generado por IA puede ser incorrecto.**

**MSG 4.** Comparación de la densidad de epífitas vasculares por hospedero detectadas en bosques montanos y bosques secos del neotrópico.

**SMG 4.** Comparison of the density of vascular epiphytes per host detected in montane forests and dry forests of the Neotropics.

MST 1

Coeficientes de correlación de Spearman entre las variables sobre diversidad de epífitas y las variables estructurales y florísticas de cada tipo de bosque con sus respectivos valores p

SMT 1

Spearman correlation coefficients between the variables on epiphyte diversity and the structural and floristic variables of each forest type with their respective p values

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bosque montano** | | | | | | | | | |
|  | **DAP** | **H** | **AC** | **DP** | **RAC** | **SE** | **RE** | **AE** | **AD** |
| DAP | 1.00 | 0.61  (4.67E-05) | 0.81  (0.0044112) | -0.54  (2.92E-06) | -0.58  (5.83E-11) | 0.56  (2.09E-12) | 0.68  (1.73E-11) | 0.83  (0.069192) | - |
| H | 0.61  (4.67E-05)\* | 1.00 | 0.45  (0.000167) | -0.34  (2.35E-06) | -0.44  (7.10E-14) | 0.24  (1.32E-16) | 0.27  (4.76E-15) | 0.45  (0.0007191) | - |
| AC | 0.81  (4.41E-03) \* | 0.45  (0.000167) | 1.00 | -0.63  (5.34E-06) | -0.63  (7.48E-06) | 0.57  (2.88E-06) | 0.70  (5.31E-06) | 0.73  (0.1272188) | - |
| DP | -0.54  (2.92E-06) \* | -0.34  (2.35E-06)\* | -0.63  (5.34E-06)\* | 1.00 | 0.51  (1.92E-06) | -0.49  (1.81E-06) | **-0.64**  **(1.88E-06)\*** | **-0.61**  **(3.73E-06)\*** | - |
| RAC | -0.58  (5.83E-11) \* | -0.44  (7.10E-14)\* | -0.63  (7.48E-06)\* | 0.51  (1.92E-06)\* | 1.00 | -0.47  (8.66E-10) | -0.66  (0.0169899) | **-0.67**  **(5.82E-06)\*** | - |
| SE | **0.56**  **(2.09E-12)**\* | 0.24  (1.32E-16)\* | **0.57**  **(2.88E-06)\*** | -0.49  (1.81E-06)\* | -0.47  (8.66E-10)\* | 1.00 | **0.76**  **(5.93E-09)\*** | **0.51**  **(1.31E-06)\*** | -0.43  (0.53) |
| RE | **0.68**  **(1.73E-11)**\* | 0.27  (4.76E-15)\* | **0.70**  **(5.31E-06)\*** | **-0.64**  **(1.88E-06)\*** | -0.66  (0.0169898) | **0.76**  **(5.93E-09)\*** | 1.00 | **0.75**  **(3.41E-06)\*** | -0.07  (0.43) |
| AE | **0.83**  **(6.92E-02)**\* | 0.45  (0.000719)\* | 0.73  (0.1272188) | **-0.61**  **(3.73E-06)\*** | **-0.67**  **(5.82E-06)\*** | **0.51**  **(1.31E-06)\*** | **0.75**  **(3.41E-06)\*** | 1.00 | 0.28  (0.92) |
| AD | **-** | - | - | **-** | **-** | -0.43  (0.53) | -0.07  (0.43) | 0.28  (0.92) | 1.00 |
| **Bosque seco** | | | | | | | | | |
| **DAP** | 1.00 | 0.73  (7.99E-08) | 0.88  (7.19E-06) | -0.55  (9.56E-09) | -0.37  (6.27E-11) | -0.39  (8.69E-12) | 0.26  (5.20E-11) | 0.70  (0.0003415) | - |
| **H** | 0.73  (7.99E-08) | 1.00 | 0.65  (2.79E-07) | -0.37  (3.28E-09) | -0.32  (4.85E-15) | -0.32  (1.03E-17) | 0.28  (5.77E-15) | **0.60**  **(6.88E-05)\*** | - |
| **AC** | 0.88  (7.19E-06) | 0.65  (2.79E-07) | 1.00 | -0.45  (3.63E-06) | -0.32  (8.66E-08) | -0.37  (6.05E-08) | 0.34  (8.33E-08) | 0.69  (0.260503) | - |
| **DP** | -0.55  (9.56E-09) | -0.37  (3.28E-09) | -0.45  (3.63E-06) | 1.00 | 0.25  (2.21E-09) | 0.05  (1.95E-09) | -0.49  (2.18E-09) | -0.35  (0.000237) | - |
| **RAC** | -0.37  (6.27E-11) | -0.32  (4.85E-15) | -0.32  (8.66E-08) | 0.25  (2.21E-09) | 1.00 | 0.20  (5.06E-11) | -0.06  (0.377015003) | **-0.22**  **(3.79E-05)\*** | - |
| **SE** | **-0.39**  **(8.69E-12)\*** | **-0.32**  **(1.03E-17)\*** | **-0.37**  **(6.05E-08)\*** | **0.05**  **(1.95E-09)\*** | 0.20  (5.06E-11) | 1.00 | 0.35  (1.28E-18) | -0.23  (3.15E-05) | -0.25  (0.15) |
| **RE** | **0.26**  **(5.20E-11)\*** | **0.28**  **(5.77E-15)\*** | **0.34**  **(8.33E-08)\*** | **-0.49**  **(2.18E-09)\*** | -0.06  (0.377015003) | 0.35  (1.28E-18) | 1.00 | 0.41  (3.71E-05) | -0.53  (0.20) |
| **AE** | 0.70  (0.0003415) | **0.60**  **(6.88E-05)\*** | 0.69  (0.260503) | -0.35  (0.000237) | **-0.22**  **(3.79E-05)\*** | -0.23  (3.15E-05) | 0.41  (3.71E-05) | 1.00 | -0.36  (0.18) |
| **AD** | - | - | - | - | - | -0.25  (0.15) | -0.53  (0.20) | -0.36  (0.18) | 1.00 |

DAP: diámetro a la altura del pecho, H: altura total del forófito, AC: área de la copa del forófito, DP: densidad de parcela, RAC: riqueza de forófito en el cuadrante, AD: apertura del dosel, DE: Índice de Shannon para la diversidad de epífitas, RE: Riqueza de epífitas, AE: Abundancia de epífitas. \* indica correlaciones estadísticamente significativas.

DAP: diameter at breast height, H: total phorophyte height, AC: phorophyte crown area, DP: plot density, RAC: phorophyte richness in the quadrant, AD: canopy openness, DE: Shannon index for epiphyte diversity, RE: Epiphyte richness, AE: Epiphyte abundance. \* indicates statistically significant correlations.

MST 2

Coeficientes del análisis de componentes principales entre las variables sobre diversidad de epífitas y las variables estructurales y florísticas de cada tipo de bosque

SMT 2

Coefficients of the principal component analysis between the variables on epiphyte diversity and the structural and floristic variables of each forest type

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bosque montano | | | | | | Bosque seco | | | | |
|  | **PC1** | **PC2** | **PC3** | **PC4** | **PC5** | **PC1** | **PC2** | **PC3** | **PC4** | **PC5** |
| DAP | -0.48621 | 0.434057 | -0.0093 | 0.048128 | 0.756831 | 0.528701 | -0.09973 | 0.27472 | -0.20516 | 0.770044 |
| H | -0.4052 | -0.12412 | -0.88322 | 0.009483 | -0.20059 | 0.496696 | -0.06658 | -0.04006 | 0.857814 | -0.10682 |
| AC | -0.42361 | 0.607634 | 0.245577 | -0.14436 | -0.60843 | 0.493393 | -0.16337 | 0.467851 | -0.35386 | -0.6211 |
| DP | 0.445012 | 0.518044 | -0.25654 | 0.681507 | -0.05771 | -0.38689 | 0.262379 | 0.829921 | 0.29331 | 0.08168 |
| RAC | 0.471096 | 0.398245 | -0.30612 | -0.71575 | 0.115995 | -0.28398 | -0.94344 | 0.123577 | 0.103999 | 0.056407 |

DAP: diámetro a la altura del pecho, H: altura total del forófito, AC: área de la copa del forófito, DP: densidad de parcela, RAC: riqueza de forófito en el cuadrante, AD: apertura del dosel.

DAP: diameter at breast height, H: total phorophyte height, AC: phorophyte crown area, DP: plot density, RAC: phorophyte richness in the quadrant, AD: canopy openness.

MST 3

Parámetros del análisis de regresión múltiple usando las variables estructurales y florísticas de los bosques como variables predictoras de la riqueza y diversidad de las epífitas vasculares

SMT 3

Parameters of the multiple regression analysis using the structural and floristic variables of the forests as predictors of the richness and diversity of vascular epiphytes

| Modelo | Variable predictora | t | p-value |
| --- | --- | --- | --- |
| Riqueza en bosque montano Rrob ~ β1DAP + β2H + β3AC + β4DP + β5RAC  p-value = 0.0002, R2 múltiple = 0.54 | Intercepto | 3.496 | 0.00154 \*\* |
|  | DAP | 0.780 | 0.44152 |
|  | H | -0.999 | 0.32593 |
|  | AC | 1.276 | 0.21197 |
|  | DP | 0.151 | 0.88097 |
|  | RAC | -2.057 | 0.04874 \* |
| Diversidad en bosque montano Srob ~ β1DAP + β2H + β3AC + β4DP + β5RAC  p-value = 0.01, R2 múltiple = 0.39 | Intercepto | 2.435 | 0.0213 \* |
|  | DAP | 1.370 | 0.1813 |
|  | H | -1.151 | 0.2591 |
|  | AC | -0.223 | 0.8251 |
|  | DP | -0.785 | 0.4388 |
|  | RAC | -1.032 | 0.3108 |
| Riqueza en bosque seco Rbst ~ β1DAP + β2H + β3AC + β4DP + β5RAC  p-value = 0.53, R2 múltiple = 0.12 | Intercepto | 2.714 | 0.0111 \* |
|  | DAP | 0.268 | 0.7908 |
|  | H | 0.010 | 0.9920 |
|  | AC | 0.315 | 0.7549 |
|  | DP | -0.839 | 0.4082 |
|  | RAC | 0.703 | 0.4876 |
| Diversidad en bosque montano Sbst ~ β1DAP + β2H + β3AC + β4DP + β5RAC  p-value = 0.38, R2 múltiple = 0.15 | Intercepto | 2.098 | 0.0447 \* |
|  | DAP | -0.546 | 0.5894 |
|  | H | -0.028 | 0.9779 |
|  | AC | -0.440 | 0.6632 |
|  | DP | -0.625 | 0.5372 |
|  | RAC | 0.246 | 0.8071 |

MST 4

Densidad de epífitas por forófito reportas en otros estudios de bosques montanos y bosques secos

SMT 4

Density of epiphytes per phorophyte reported in other studies of montane forests and dry forests

| Tipo de bosque | País | Autor-Sitio | | Número de especies | Densidad especies/árbol | No hospederos muestreados |
| --- | --- | --- | --- | --- | --- | --- |
| Bosque montano | México | Wolf, 2005 | Florecilla1 | 27 | 0.771 | 35 |
| Chilil1 | 35 | 1.000 | 35 |
| Chivero | 34 | 0.971 | 35 |
| Basom1 | 23 | 0.657 | 35 |
| Costik | 24 | 0.686 | 35 |
| Chilil2 | 16 | 0.457 | 35 |
| Antonio | 29 | 0.829 | 35 |
| Basom2 | 24 | 0.686 | 35 |
| Mitzitón | 24 | 0.686 | 35 |
| Carrizal | 16 | 0.457 | 35 |
| San José | 18 | 0.514 | 35 |
| R. Nuevo | 23 | 0.657 | 35 |
| Las Flores | 18 | 0.514 | 35 |
| Florecilla2 | 15 | 0.429 | 35 |
| Florecilla3 | 14 | 0.400 | 35 |
| Milpoleta | 13 | 0.371 | 35 |
| Colombia | Higuera & Wolf, 2010 | Plataformas | 14 | 0.400 | 35 |
| Cueva del oso | 10 | 0.286 | 35 |
| El Encanto | 9 | 0.257 | 35 |
| Roble Caído | 10 | 0.286 | 35 |
| Sendero Alto | 13 | 0.371 | 35 |
| La Corraleja | 10 | 0.286 | 35 |
| Joya et al., 2025 | Presente estudio | 11 | 0.314 | 35 |
| Bosque seco | México | Reyes-García et al., 2008 | Chamela | 10 | 0.158 | 63 |
| Siaz-Torres et al., 2021 | El Cielo-semideciduo | 11 | 0.037 | 294 |
| Siaz-Torres et al., 2021 | El Cielo-deciduo | 20 | 0.141 | 141 |
| Ecuador | Werner& Gradstein, 2009 | Jerusalén | 8 | 0.080 | 100 |
| Colombia | Mercado et al., 2023 | Montes de María | 13 | 0.5 | 26 |
| Joya et al., 2025 | Presente estudio | 4 | 0.114 | 35 |

\*orquídeas y bromelias epífitas específicamente. \*\* código de país de acuerdo con el sistema de clasificación ISO3. P: precipitación media anual (mm); T: temperatura media anual (°C).

\*epiphytic orchids and bromeliads specifically. \*\*country code according to the ISO3 classification system. P: mean annual precipitation (mm); T: mean annual temperature (°C).