

Document expliquant la sortie sommaire de la fonction « mvpart »

```
> summary(ARM1)
Call:
mvpart(form = data.matrix(Orisph) ~ Subsdens + Watrcont +
Sphagn.1 + Sphagn.2 + Sphagn.3 + Sphagn.4 + Lignlitt + Barepeat +
Interface + Shrub.1 + Shrub.2 + Shrub.3 + Blanket + Hummock, data
= Ori_Sph_Env, xv = "min", xvmult = 500)
```

```
n= 70
      CP nsplit rel error      xerror      xstd
1 0.25169191 0 1.0000000 1.0305347 0.04310513
2 0.06177166 1 0.7483081 0.8691889 0.05573914
3 0.04493453 2 0.6865364 0.8473758 0.05644584
4 0.04210851 3 0.6416019 0.8420220 0.05838438
5 0.04153963 4 0.5994934 0.8390042 0.05863637
6 0.02885338 5 0.5579537 0.8334403 0.05990103
7 0.02792465 6 0.5291004 0.8273274 0.05964728
```

Suite à ce tableau, vous avez des informations plus détaillées pour chacune des bipartitions.

Node number 1: 70 observations, complexity param=0.2516919

```
Means=0.2216,0.04894,0.2382,0.04425,0.01397,0.01749,0.08566,0.011
82,0.04772,0.1108,0.06104,0.09172,0.1772,0.3012,0.3267,0.3663,0.0
6608,0.08495,0.05634,0.04322,0.02899,0.0138,0.08462,0.01009,0.061
21,0.01721,0.06492,0.01064,0.04639,0.01387,0.235,0.03918,0.0664,0
.0596,0.05574, Summed MSE=0.3886434
```

```
left son=2 (39 obs) right son=3 (31 obs)
```

Primary splits:

```
Watrcont < 385.1 to the right, improve=0.2516919, (0 missing)
Hummock < 0.5 to the left, improve=0.1643434, (0 missing)
Blanket < 0.5 to the right, improve=0.1643434, (0 missing)
Shrub.1 < 0.5 to the right, improve=0.1631910, (0 missing)
Shrub.3 < 0.5 to the left, improve=0.1512653, (0 missing)
```

Node number 2: 39 observations, complexity param=0.06177166

```
Means=0.201,0.01414,0.2578,0.008675,0.003837,0.005072,0.05587,0.0
04832,0.07307,0.04842,0.01157,0.07563,0.0686,0.229,0.2622,0.522,0
.0226,0.1083,0.04437,0.01118,0.008654,0.0135,0.1275,0.005746,0.08
276,0.004832,0.02016,0.001566,0.03754,0.005024,0.3314,0.04456,0.0
8916,0.06817,0.1, Summed MSE=0.3037596
```

```
left son=4 (7 obs) right son=5 (32 obs)
```

Primary splits:

```
Subsdens < 51.795 to the right, improve=0.1418548, (0 missing)
Hummock < 0.5 to the left, improve=0.1073556, (0 missing)
Blanket < 0.5 to the right, improve=0.1073556, (0 missing)
```

Marianne Philibert 20/3/08 16:37

Commentaire: L'argument « xv = min » vous permet de spécifier que vous voulez l'arbre avec la plus petite erreur relative de validation croisée telle que décrite dans le document.

Marianne Philibert 20/3/08 16:38

Commentaire: L'argument « xvmult » vous permet de choisir le nombre de validation croisée multiple que vous voulez faire (le nombre de permutations en d'autres mots).

Marianne Philibert 20/3/08 16:39

Commentaire: À l'intérieur de ce tableau sommaire, vous trouverez plein d'information supplémentaire concernant votre arbre. Entre autres, cette colonne « CP », soit « complexity parameter » en anglais, vous donne la variance expliquée par nœuds.

Marianne Philibert 20/3/08 16:38

Commentaire: La colonne « nsplit » vous informe de quelle bipartition vous regardez sur cette ligne.

Marianne Philibert 20/3/08 16:53

Commentaire: Voici les détails de la deuxième bipartition

Marianne Philibert 20/3/08 16:54

Commentaire: Voici sa contribution au coefficient de détermination

Marianne Philibert 20/3/08 16:56

Commentaire: Le nombre d'objets qui sont aller à gauche

Marianne Philibert 20/3/08 16:55

Commentaire: Le nombre d'objets qui sont aller à droite

Marianne Philibert 20/3/08 16:57

Commentaire: Nom de la variable ayant servit à faire la bipartition

Marianne Philibert 20/3/08 16:57

Commentaire: Seuil auquel on a divisé les sites en deux

Watrcont < 645.55 to the right, improve=0.1043428, (0 missing)
Shrub.1 < 0.5 to the right, improve=0.0894604, (0 missing)

Node number 3: 31 observations, complexity param=0.04493453

Means=0.2475,0.09272,0.2135,0.089,0.02672,0.03311,0.1231,0.0206,0.01583,0.1892,0.1233,0.112,0.3139,0.392,0.4079,0.1704,0.1208,0.05557,0.0714,0.08352,0.05457,0.01417,0.03071,0.01556,0.0341,0.03278,0.1212,0.02205,0.05754,0.025,0.1136,0.03242,0.03777,0.04881,0, Summed MSE=0.2745525

left son=6 (11 obs) right son=7 (20 obs)

Primary splits:

Watrcont < 323.54 to the right, improve=0.1436291, (0 missing)
Shrub.1 < 0.5 to the right, improve=0.1342149, (0 missing)
Subsdens < 38.895 to the left, improve=0.1117806, (0 missing)
Blanket < 0.5 to the left, improve=0.0859100, (0 missing)
Hummock < 0.5 to the right, improve=0.0859100, (0 missing)

Node number 4: 7 observations

Means=0.06388,0.02309,0.08645,0,0.02138,0,0.1057,0.01234,0.0213,0.008726,0.02985,0.07294,0.1181,0.1198,0.7164,0.02138,0.09769,0.02346,0.01511,0.02618,0.008726,0.3209,0.008726,0.02408,0.01234,0.01234,0.008726,0.07603,0,0.211,0,0.02084,0.02648,0.05617, Summed MSE=0.2577799

Node number 5: 32 observations, complexity param=0.04153963

Means=0.231,0.01219,0.2953,0.01057,0,0.006182,0.04497,0.003189,0.08439,0.05901,0.01219,0.08564,0.06765,0.2533,0.2933,0.4794,0.02287,0.1106,0.04895,0.01032,0.004821,0.01454,0.08516,0.005094,0.09559,0.003189,0.02187,0,0.02912,0.006123,0.3578,0.05431,0.1041,0.07729,0.1096, Summed MSE=0.261302

left son=10 (25 obs) right son=11 (7 obs)

Primary splits:

Blanket < 0.5 to the right, improve=0.13515100, (0 missing)
Hummock < 0.5 to the left, improve=0.13515100, (0 missing)
Shrub.1 < 0.5 to the right, improve=0.11258570, (0 missing)
Shrub.3 < 0.5 to the left, improve=0.09503507, (0 missing)
Subsdens < 31.72 to the right, improve=0.07990299, (0 missing)

Node number 6: 11 observations, complexity param=0.04210851

Means=0.2198,0.06715,0.2363,0.04605,0.04027,0.01595,0.1034,0.0275,0.03771,0.1571,0.1132,0.08953,0.2483,0.3277,0.3669,0.3443,0.1178,0.04453,0.03804,0.06735,0.03883,0.01447,0.03701,0.01823,0.07427,0.02853,0.0765,0.01562,0.0415,0.009091,0.2376,0.05007,0.0827,0.07758,0, Summed MSE=0.295447

left son=12 (4 obs) right son=13 (7 obs)

Primary splits:

Subdens < 36.38 to the left, improve=0.3524902, (0 missing)
Shrub.1 < 0.5 to the right, improve=0.2190312, (0 missing)
Blanket < 0.5 to the right, improve=0.2149659, (0 missing)
Hummock < 0.5 to the left, improve=0.2149659, (0 missing)
Sphagn.2 < 0.5 to the right, improve=0.1536943, (0 missing)

Node number 7: 20 observations

Means=0.2628,0.1068,0.2009,0.1126,0.01926,0.04254,0.134,0.01681,0.003801,0.2069,0.1289,0.1243,0.3499,0.4275,0.4305,0.07476,0.1224,0.06163,0.08974,0.09241,0.06322,0.01401,0.02725,0.0141,0.01201,0.03512,0.1458,0.02559,0.06636,0.03375,0.04545,0.02271,0.01306,0.03299,0, Summed MSE=0.2019382

Node number 10: 25 observations, complexity param=0.02885338

Means=0.2119,0.007551,0.3109,0,0,0.003468,0.04228,0.004082,0.08882,0.06294,0,0.0872,0.02889,0.2185,0.2629,0.5236,0.01736,0.1145,0.04484,0.004082,0.00343,0.01445,0.06392,0,0.09652,0.004082,0.01671,0,0.03253,0.003393,0.4088,0.05216,0.1122,0.07444,0.1027, Summed MSE=0.2163176

left son=20 (14 obs) right son=21 (11 obs)

Primary splits:

Shrub.1 < 0.5 to the right, improve=0.14514910, (0 missing)
Watrcont < 608.235 to the right, improve=0.12075730, (0 missing)
Shrub.2 < 0.5 to the right, improve=0.09383389, (0 missing)
Shrub.3 < 0.5 to the left, improve=0.08603634, (0 missing)
Subdens < 46.92 to the right, improve=0.06640176, (0 missing)

Node number 11: 7 observations

Means=0.2995,0.02874,0.2397,0.04833,0,0.01587,0.05458,0,0.06857,0.04499,0.05572,0.08009,0.2061,0.3775,0.4019,0.3216,0.04252,0.09681,0.0636,0.03262,0.009788,0.01489,0.161,0.02329,0.09226,0,0.04033,0,0.01695,0.01587,0.1756,0.06199,0.07515,0.08747,0.1343, Summed MSE=0.2605197

Node number 12: 4 observations

Means=0.1476,0,0.2809,0,0,0.02273,0.05791,0.02273,0.0411,0.1527,0,0.1104,0.1087,0.3155,0.4091,0.2395,0.03356,0.08655,0,0,0,0.02373,0,0.1348,0,0,0,0.04646,0,0.5037,0.1197,0.1769,0.1595,0, Summed MSE=0.1673258

Node number 13: 7 observations

Means=0.261,0.1055,0.2109,0.07236,0.06327,0.01207,0.1295,0.03023,0.03578,0.1596,0.1778,0.07761,0.3281,0.3346,0.3428,0.4042,0.1659,

0.02052,0.05977,0.1058,0.06101,0.02273,0.04459,0.02865,0.0397,0.04483,0.1202,0.02454,0.03866,0.01429,0.0855,0.01026,0.02885,0.03077,0, Summed MSE=0.2050072

Node number 20: 14 observations

Means=0.2248,0,0.3676,0,0,0,0,0,0.1368,0,0,0.1172,0,0.1758,0.264,0.4967,0.01752,0.1386,0.02401,0,0,0.008964,0.07499,0,0.07544,0,0,0,0.008303,0,0.4043,0.04553,0.1312,0.05362,0.1767, Summed MSE=0.1862325

Node number 21: 11 observations

Means=0.1954,0.01716,0.2387,0,0,0.007883,0.0961,0.009278,0.02778,0.143,0,0.04904,0.06566,0.2729,0.2615,0.5579,0.01716,0.0838,0.07135,0.009278,0.007795,0.02143,0.04984,0,0.1234,0.009278,0.03797,0,0.06336,0.007711,0.4145,0.06059,0.08806,0.1009,0.008552, Summed MSE=0.1832479