# Principal Component Analysis

Dataset otu_table

This dataset contains 151 individuals and 50 variables.

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## Warning: package 'FactoMineR' was built under R version 3.5.2
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### 1. Study of the outliers

The analysis of the graphs does not detect any outlier.

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### 2. Inertia distribution

The inertia of the first dimensions shows if there are strong relationships between variables and suggests the number of dimensions that should be studied.

The first two dimensions of analyse express **15.88%** of the total dataset inertia ; that means that 15.88% of the individuals (or variables) cloud total variability is explained by the plane. This is a very small percentage and the first plane represents a small part of the data variability. This value is greater than the reference value that equals **9.47%**, the variability explained by this plane is thus significant (the reference value is the 0.95-quantile of the inertia percentages distribution obtained by simulating 1726 data tables of equivalent size on the basis of a normal distribution).

From these observations, it is important to also interpret the dimensions greater or equal to the third one.

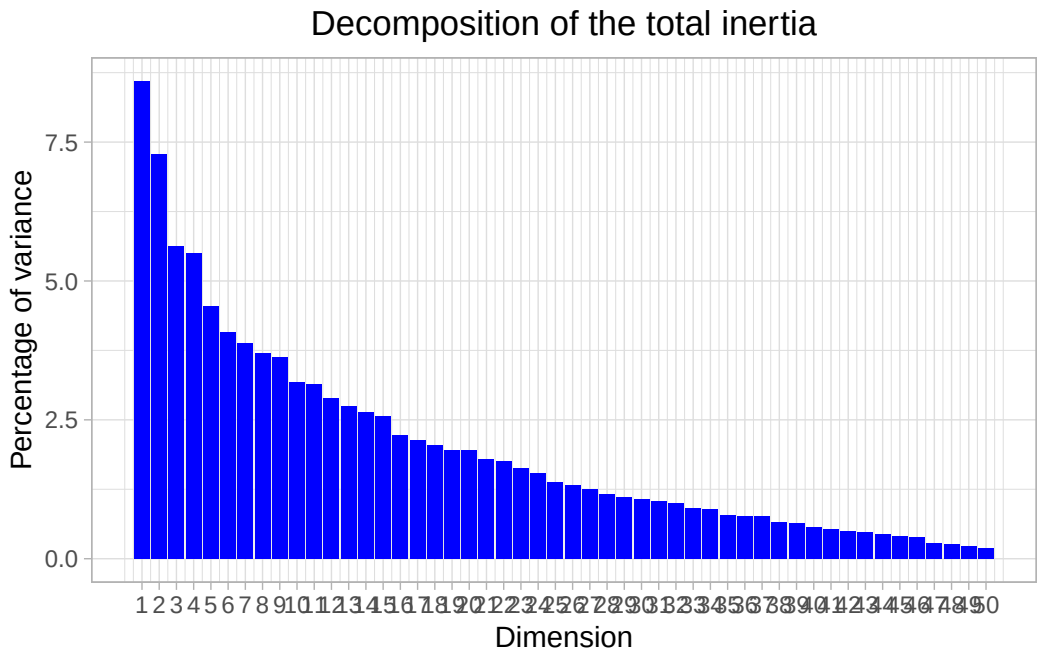


**Figure 2 - Decomposition of the total inertia**

An estimation of the right number of axis to interpret suggests to restrict the analysis to the description of the first 11 axis. These axis present an amount of inertia greater than those obtained by the 0.95-quantile of random distributions (53.14% against 41.8%). This observation suggests that only these axis are carrying a real information. As a consequence, the description will stand to these axis.

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### 3. Description of the plane 1:2

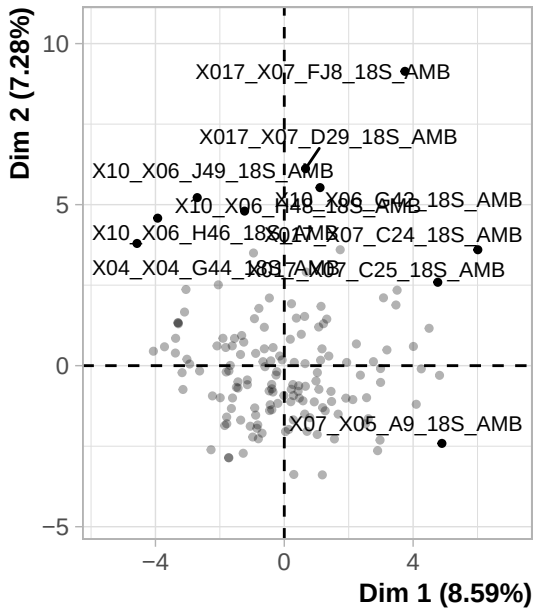


**Figure 3.1 - Individuals factor map (PCA)** *The labeled individuals are those with the higher contribution to the plane construction.*

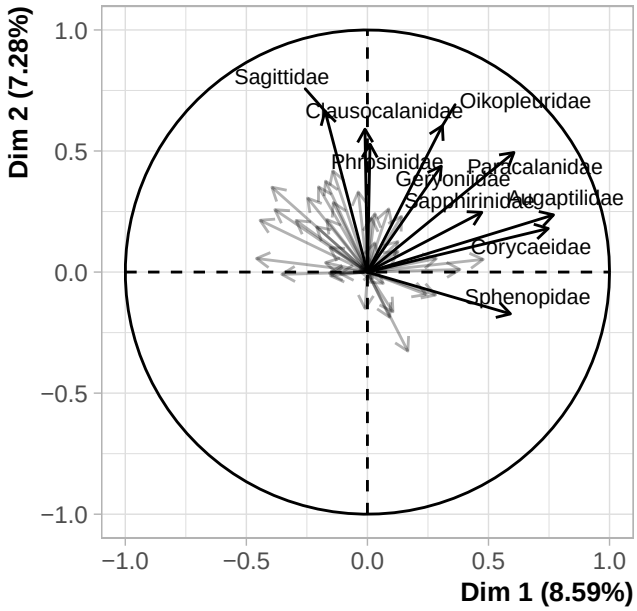


**Figure 3.2 - Variables factor map (PCA)** *The labeled variables are those the best shown on the plane.*

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The **dimension 1** opposes individuals such as *X017_X07_FJ8_18S_AMB*, *X10_X06_G42_18S_AMB*, *X017_X07_C24_18S_AMB*, *X017_X07_D29_18S_AMB*, *X017_X07_C25_18S_AMB* and *X07_X05_A9_18S_AMB* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X10_X06_J49_18S_AMB*, *X10_X06_H46_18S_AMB*, *X04_X04_G44_18S_AMB* and *X10_X06_H48_18S_AMB* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *X07_X05_A9_18S_AMB* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Sapphirinidae*, *Corycaeidae*, *Sphenopidae*, *Acartiidae*, *Temoridae*, *Doliolidae*, *Augaptilidae*, *Paracalanidae*, *Eupronoidae* and *Euphausiidae* (variables are sorted from the strongest).
- low values for the variables *Candaciidae*, *Subeucalanidae*, *Sagittidae*, *Sphaeronectidae*, *Hippolytidae*, *Squillidae*, *Phrosinidae*, *Clausocalanidae* and *Processidae* (variables are sorted from the weakest).

The group in which the individuals *X017_X07_FJ8_18S_AMB*, *X10_X06_G42_18S_AMB*, *X017_X07_C24_18S_AMB*, *X017_X07_D29_18S_AMB* and *X017_X07_C25_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Geryoniidae*, *Oikopleuridae*, *Paracalanidae*, *Sagittidae*, *Augaptilidae*, *Clausocalanidae*, *Aetideidae*, *Phrosinidae*, *Halocyprididae* and *Corycaeidae* (variables are sorted from the strongest).

The group in which the individuals *X10_X06_J49_18S_AMB*, *X10_X06_H46_18S_AMB*, *X04_X04_G44_18S_AMB* and *X10_X06_H48_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *Processidae*, *Callianassidae*, *Coenobitidae*, *Squillidae*, *Centropagidae*, *Candaciidae*, *Palaemonidae*, *Creseidae*, *Sagittidae* and *Subeucalanidae* (variables are sorted from the strongest).
- low values for the variables *Augaptilidae*, *Corycaeidae*, *Doliolidae*, *Sphenopidae*, *Paracalanidae*, *Hormathiidae*, *Acartiidae* and *Euphausiidae* (variables are sorted from the weakest).

The group 4 (characterized by a negative coordinate on the axis) is sharing :

- high values for the variable *Calanidae*.

- low values for variables like *Paracalanidae*, *Sagittidae*, *Corycaeidae*, *Temoridae*, *Sapphirinidae*, *Clausocalanidae*, *Augaptilidae*, *Phrosinidae*, *Creseidae* and *Geryoniidae* (variables are sorted from the weakest).

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The **dimension 2** opposes individuals such as *X017_X07_FJ8_18S_AMB*, *X10_X06_G42_18S_AMB*, *X017_X07_C24_18S_AMB*, *X017_X07_D29_18S_AMB*, *X10_X06_J49_18S_AMB*, *X017_X07_C25_18S_AMB*, *X10_X06_H46_18S_AMB*, *X04_X04_G44_18S_AMB* and *X10_X06_H48_18S_AMB* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as ** and *X07_X05_A9_18S_AMB* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X10_X06_J49_18S_AMB*, *X10_X06_H46_18S_AMB*, *X04_X04_G44_18S_AMB* and *X10_X06_H48_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Processidae*, *Callianassidae*, *Coenobitidae*, *Squillidae*, *Centropagidae*, *Candaciidae*, *Palaemonidae*, *Creseidae*, *Sagittidae* and *Subeucalanidae* (variables are sorted from the strongest).
- low values for the variables *Augaptilidae*, *Corycaeidae*, *Doliolidae*, *Sphenopidae*, *Paracalanidae*, *Hormathiidae*, *Acartiidae* and *Euphausiidae* (variables are sorted from the weakest).

The group in which the individuals *X017_X07_FJ8_18S_AMB*, *X10_X06_G42_18S_AMB*, *X017_X07_C24_18S_AMB*, *X017_X07_D29_18S_AMB* and *X017_X07_C25_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Geryoniidae*, *Oikopleuridae*, *Paracalanidae*, *Sagittidae*, *Augaptilidae*, *Clausocalanidae*, *Aetideidae*, *Phrosinidae*, *Halocyprididae* and *Corycaeidae* (variables are sorted from the strongest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for the variable *Calanidae*.
- low values for variables like *Paracalanidae*, *Sagittidae*, *Corycaeidae*, *Temoridae*, *Sapphirinidae*, *Clausocalanidae*, *Augaptilidae*, *Phrosinidae*, *Creseidae* and *Geryoniidae* (variables are sorted from the weakest).

The group in which the individual *X07_X05_A9_18S_AMB* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for variables like *Sapphirinidae*, *Corycaeidae*, *Sphenopidae*, *Acartiidae*, *Temoridae*, *Doliolidae*, *Augaptilidae*, *Paracalanidae*, *Eupronoidae* and *Euphausiidae* (variables are sorted from the strongest).
- low values for the variables *Candaciidae*, *Subeucalanidae*, *Sagittidae*, *Sphaeronectidae*, *Hippolytidae*, *Squillidae*, *Phrosinidae*, *Clausocalanidae* and *Processidae* (variables are sorted from the weakest).

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**4. Description of the plane 3:4**

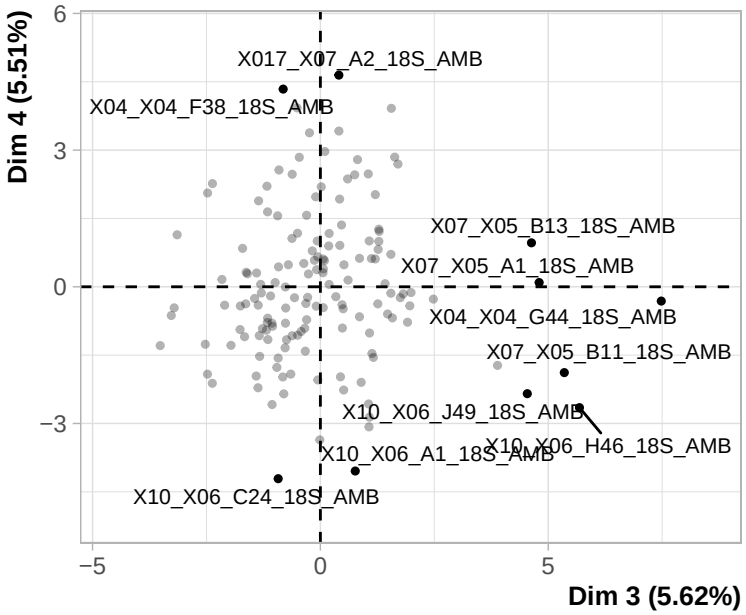


**Figure 4.1 - Individuals factor map (PCA)** *The labeled individuals are those with the higher contribution to the plane construction.*

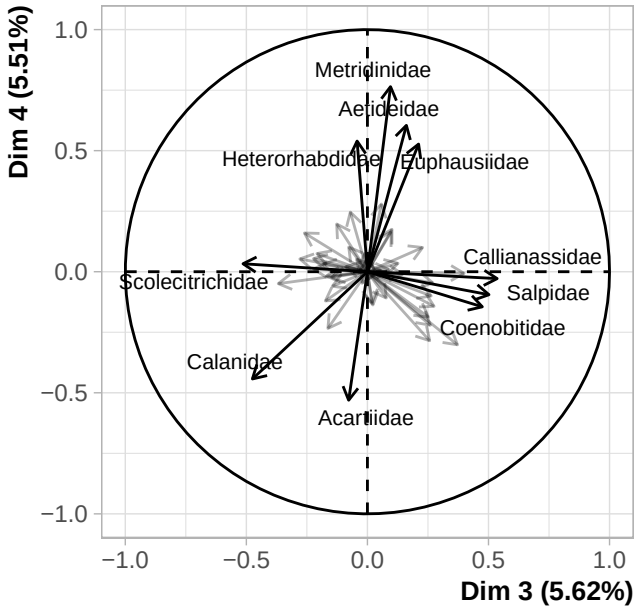


**Figure 4.2 - Variables factor map (PCA)** *The labeled variables are those the best shown on the plane.*

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The **dimension 3** opposes individuals such as *X04_X04_G44_18S_AMB*, *X10_X06_H46_18S_AMB*, *X10_X06_J49_18S_AMB*, *X07_X05_B13_18S_AMB*, *X07_X05_B11_18S_AMB* and *X07_X05_A1_18S_AMB* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X10_X06_C24_18S_AMB* and *X10_X06_A1_18S_AMB* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X04_X04_G44_18S_AMB*, *X10_X06_H46_18S_AMB*, *X10_X06_J49_18S_AMB*,

*X07_X05_B13_18S_AMB*, *X07_X05_B11_18S_AMB* and *X07_X05_A1_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Coenobitidae*, *Callianassidae*, *Lycaeidae*, *Salpidae*, *Centropagidae*, *Temoridae*, *Creseidae*, *Pandalidae*, *Aequoreidae* and *Squillidae* (variables are sorted from the strongest).
- low values for the variables *Calanidae* and *Scolecitrichidae* (variables are sorted from the weakest).

The group in which the individuals *X10_X06_C24_18S_AMB* and *X10_X06_A1_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Calanidae*, *Acartiidae*, *Hippolytidae*, *Sphaeronectidae* and *Palaemonidae* (variables are sorted from the strongest).
- low values for the variables *Metridinidae*, *Euphausiidae*, *Aetideidae*, *Heterorhabdidae*, *Coenobitidae*, *Pandalidae*, *Callianassidae* and *Typhloscolecidae* (variables are sorted from the weakest).

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The **dimension 4** opposes individuals such as *X017_X07_A2_18S_AMB* and *X04_X04_F38_18S_AMB* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X10_X06_C24_18S_AMB* and *X10_X06_A1_18S_AMB* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X017_X07_A2_18S_AMB* and *X04_X04_F38_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Metridinidae*, *Aetideidae*, *Euphausiidae*, *Heterorhabdidae* and *Typhloscolecidae* (variables are sorted from the strongest).
- low values for the variables *Calanidae*, *Acartiidae*, *Creseidae* and *Doliolidae* (variables are sorted from the weakest).

The group in which the individuals *X10_X06_C24_18S_AMB* and *X10_X06_A1_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Calanidae*, *Acartiidae*, *Hippolytidae*, *Sphaeronectidae* and *Palaemonidae* (variables are sorted from the strongest).
- low values for the variables *Metridinidae*, *Euphausiidae*, *Aetideidae*, *Heterorhabdidae*, *Coenobitidae*, *Pandalidae*, *Callianassidae* and *Typhloscolecidae* (variables are sorted from the weakest).

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**5. Description of the plane 5:6**

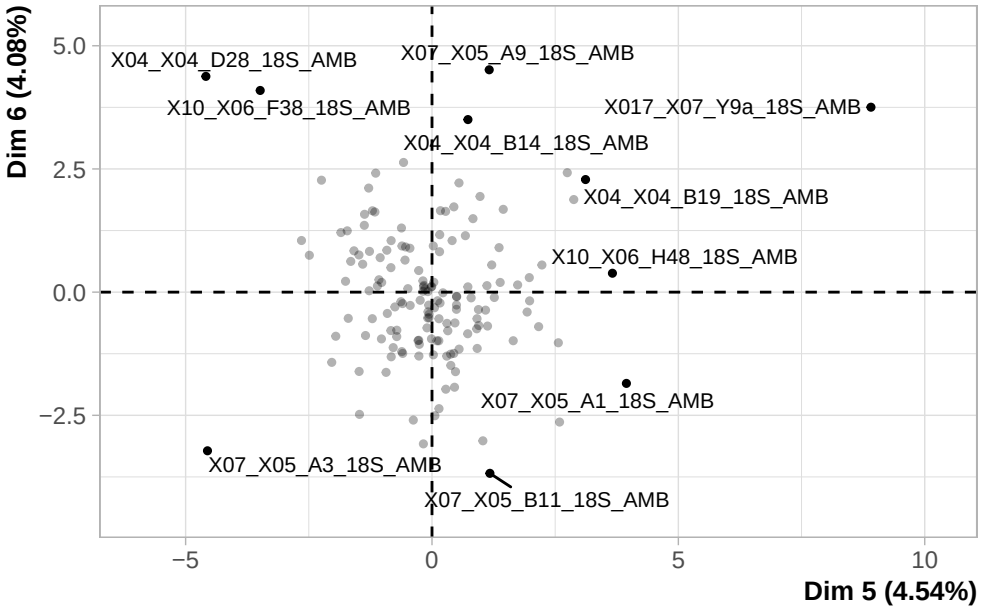


**Figure 5.1 - Individuals factor map (PCA)** *The labeled individuals are those with the higher contribution to the plane construction.*

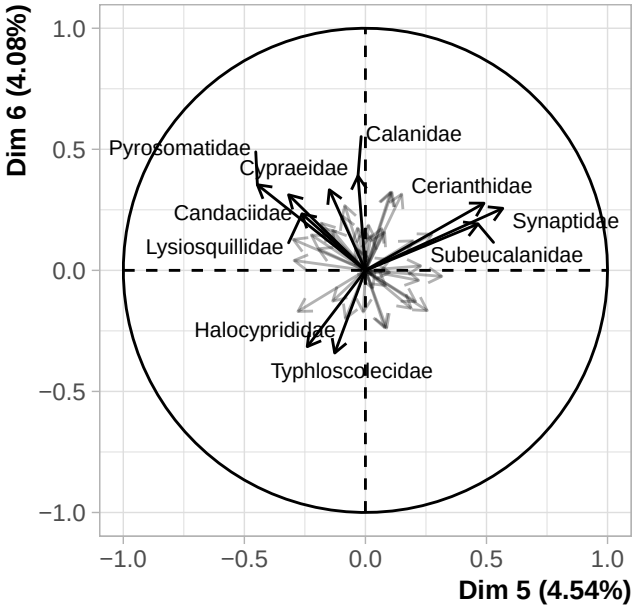


**Figure 5.2 - Variables factor map (PCA)** *The labeled variables are those the best shown on the plane.*

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The **dimension 5** opposes individuals such as *X017_X07_Y9a_18S_AMB*, *X04_X04_B19_18S_AMB*, *X04_X04_B14_18S_AMB*, *X07_X05_A9_18S_AMB* and *X10_X06_H48_18S_AMB* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X04_X04_D28_18S_AMB* and *X10_X06_F38_18S_AMB* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X017_X07_Y9a_18S_AMB*, *X04_X04_B19_18S_AMB*,

*X04_X04_B14_18S_AMB*, *X07_X05_A9_18S_AMB* and *X10_X06_H48_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Synaptidae*, *Sphenopidae*, *Corycaeidae*, *Pontellidae*, *Hippolytidae*, *Cerianthidae*, *Hormathiidae*, *Scolecitrichidae*, *Subeucalanidae* and *Squillidae* (variables are sorted from the strongest).

The group in which the individuals *X04_X04_D28_18S_AMB* and *X10_X06_F38_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Pyrosomatidae*, *Candaciidae*, *Metridinidae*, *Aetideidae*, *Acartiidae*, *Lysiosquillidae*, *Aequoreidae*, *Heterorhabdidae* and *Callianassidae* (variables are sorted from the strongest).

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The **dimension 6** opposes individuals such as *X017_X07_Y9a_18S_AMB*, *X04_X04_D28_18S_AMB*, *X04_X04_B19_18S_AMB*, *X10_X06_F38_18S_AMB*, *X04_X04_B14_18S_AMB*, *X07_X05_A9_18S_AMB* and *X10_X06_H48_18S_AMB* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X07_X05_A3_18S_AMB*, *X07_X05_A1_18S_AMB* and *X07_X05_B11_18S_AMB* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X04_X04_D28_18S_AMB* and *X10_X06_F38_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Pyrosomatidae*, *Candaciidae*, *Metridinidae*, *Aetideidae*, *Acartiidae*, *Lysiosquillidae*, *Aequoreidae*, *Heterorhabdidae* and *Callianassidae* (variables are sorted from the strongest).

The group in which the individuals *X017_X07_Y9a_18S_AMB*, *X04_X04_B19_18S_AMB*, *X04_X04_B14_18S_AMB*, *X07_X05_A9_18S_AMB* and *X10_X06_H48_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for variables like *Synaptidae*, *Sphenopidae*, *Corycaeidae*, *Pontellidae*, *Hippolytidae*, *Cerianthidae*, *Hormathiidae*, *Scolecitrichidae*, *Subeucalanidae* and *Squillidae* (variables are sorted from the strongest).

The group in which the individuals *X07_X05_A3_18S_AMB*, *X07_X05_A1_18S_AMB* and *X07_X05_B11_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Typhloscolecidae* and *Halocyprididae* (variables are sorted from the strongest).
- low values for variables like *Pyrosomatidae*, *Calanidae*, *Candaciidae*, *Scolecitrichidae*, *Temoridae*, *Callianassidae*, *Sphenopidae*, *Sapphirinidae*, *Processidae* and *Coenobitidae* (variables are sorted from the weakest).

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## 6. Description of the plane 7:8

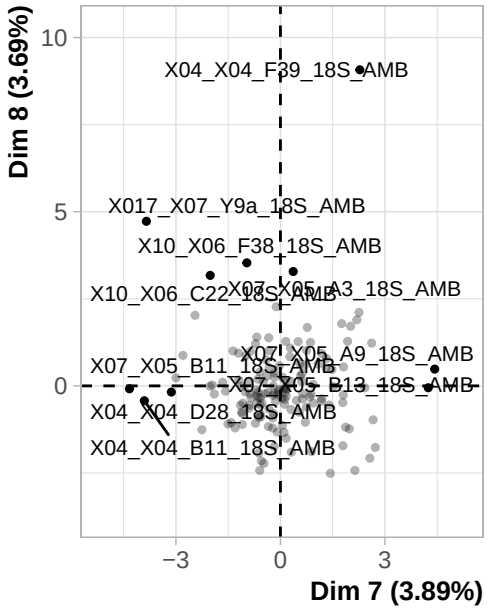


**Figure 6.1 - Individuals factor map (PCA)** *The labeled individuals are those with the higher contribution to the plane construction.*

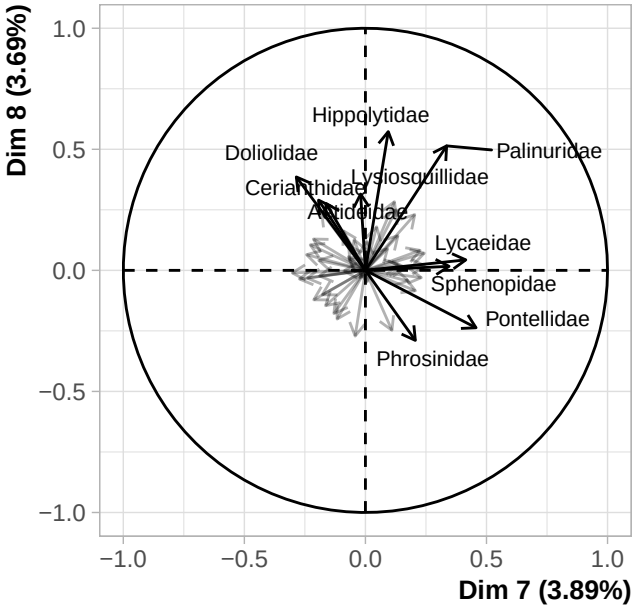


**Figure 6.2 - Variables factor map (PCA)** *The labeled variables are those the best shown on the plane.*

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The **dimension 7** opposes individuals such as *X07_X05_B13_18S_AMB* and *X07_X05_A9_18S_AMB* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X10_X06_C22_18S_AMB*, *X017_X07_Y9a_18S_AMB*, *X04_X04_D28_18S_AMB*, *X07_X05_B11_18S_AMB*, *X10_X06_F38_18S_AMB*, *X04_X04_B11_18S_AMB* and *X07_X05_A3_18S_AMB* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group 1 (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Phrosinidae*, *Pontellidae* and *Eupronoidae* (variables are sorted from the strongest).
- low values for the variables *Aetideidae*, *Doliolidae*, *Sapphirinidae* and *Sphaeronectidae* (variables are sorted from the weakest).

The group in which the individuals *X07_X05_B13_18S_AMB* and *X07_X05_A9_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Lycaeidae*, *Palinuridae*, *Palaemonidae* and *Sphenopidae* (variables are sorted from the strongest).
- low values for the variables *Heterorhabdidae*, *Metridinidae* and *Geryoniidae* (variables are sorted from the weakest).

The group in which the individuals *X04_X04_D28_18S_AMB*, *X07_X05_B11_18S_AMB* and *X04_X04_B11_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Callianassidae*, *Aetideidae*, *Scombridae*, *Oikopleuridae*, *Centropagidae* and *Pyrosomatidae* (variables are sorted from the strongest).
- low values for the variables *Pontellidae*, *Lycaeidae*, *Euphausiidae* and *Processidae* (variables are sorted from the weakest).

The group in which the individuals *X10_X06_C22_18S_AMB*, *X017_X07_Y9a_18S_AMB*, *X10_X06_F38_18S_AMB* and *X07_X05_A3_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Doliolidae*, *Lysiosquillidae*, *Cerianthidae*, *Typhloscolecidae*, *Sapphirinidae*, *Metridinidae*, *Halocyprididae* and *Cypraeidae* (variables are sorted from the strongest).

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The **dimension 8** opposes individuals such as *X04_X04_F39_18S_AMB*, *X07_X05_B13_18S_AMB*, *X10_X06_C22_18S_AMB*, *X017_X07_Y9a_18S_AMB*, *X07_X05_A9_18S_AMB*, *X10_X06_F38_18S_AMB* and *X07_X05_A3_18S_AMB* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals characterized by a strongly negative coordinate on the axis (to the bottom of the graph).

The group in which the individuals *X10_X06_C22_18S_AMB*, *X017_X07_Y9a_18S_AMB*, *X10_X06_F38_18S_AMB* and *X07_X05_A3_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Doliolidae*, *Lysiosquillidae*, *Cerianthidae*, *Typhloscolecidae*, *Sapphirinidae*, *Metridinidae*, *Halocyprididae* and *Cypraeidae* (variables are sorted from the strongest).

The group in which the individuals *X07_X05_B13_18S_AMB* and *X07_X05_A9_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Lycaeidae*, *Palinuridae*, *Palaemonidae* and *Sphenopidae* (variables are sorted from the strongest).
- low values for the variables *Heterorhabdidae*, *Metridinidae* and *Geryoniidae* (variables are sorted from the weakest).

The group in which the individual *X04_X04_F39_18S_AMB* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Hippolytidae*, *Palinuridae* and *Clausocalanidae* (variables are sorted from the strongest).

The group 4 (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Phrosinidae*, *Pontellidae* and *Eupronoidae* (variables are sorted from the strongest).

- low values for the variables *Aetideidae*, *Doliolidae*, *Sapphirinidae* and *Sphaeronectidae* (variables are sorted from the weakest).

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**7. Description of the plane 9:10**

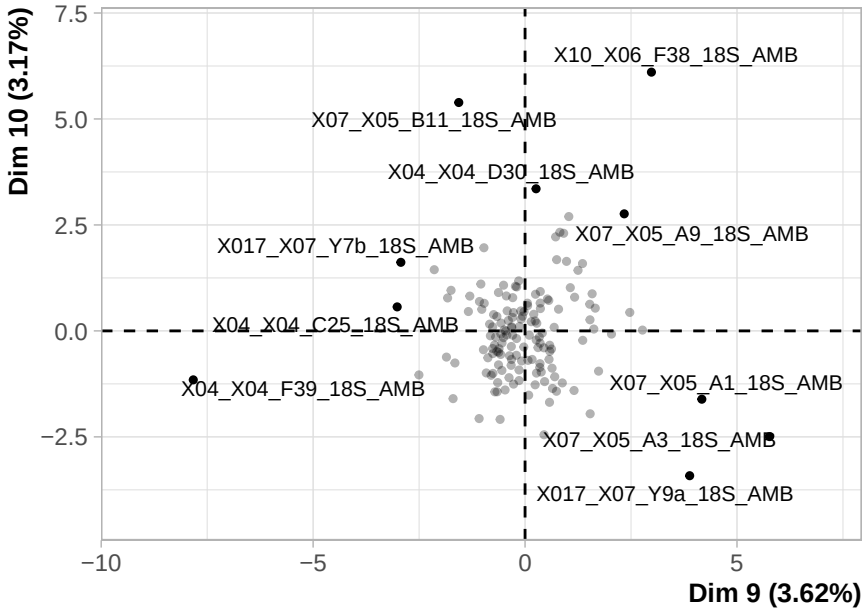


**Figure 7.1 - Individuals factor map (PCA)** *The labeled individuals are those with the higher contribution to the plane construction.*

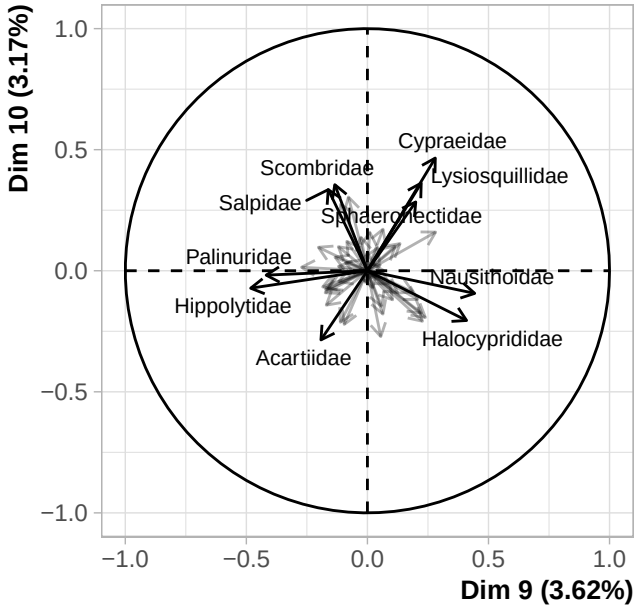


**Figure 7.2 - Variables factor map (PCA)** *The labeled variables are those the best shown on the plane.*

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The **dimension 9** opposes individuals such as *X07_X05_A3_18S_AMB*, *X017_X07_Y9a_18S_AMB*, *X07_X05_A1_18S_AMB* and *X07_X05_A9_18S_AMB* (to the right of the graph, characterized

by a strongly positive coordinate on the axis) to individuals such as *X04_X04_F39_18S_AMB*, *X017_X07_Y7b_18S_AMB* and *X04_X04_C25_18S_AMB* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individual *X07_X05_A9_18S_AMB* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Sphaeronectidae*, *Lysiosquillidae* and *Sphenopidae* (variables are sorted from the strongest).
- low values for the variables *Metridinidae*, *Aetideidae* and *Acartiidae* (variables are sorted from the weakest).

The group in which the individuals *X07_X05_A3_18S_AMB*, *X017_X07_Y9a_18S_AMB* and *X07_X05_A1_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Typhloscolecidae*, *Centropagidae*, *Cerianthidae*, *Subeucalanidae*, *Synaptidae*, *Doliolidae*, *Sapphirinidae*, *Nausithoidae*, *Hormathiidae* and *Creseidae* (variables are sorted from the strongest).

The group in which the individual *X04_X04_F39_18S_AMB* stands (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Hippolytidae*, *Palinuridae* and *Clausocalanidae* (variables are sorted from the strongest).

The group in which the individuals *X017_X07_Y7b_18S_AMB* and *X04_X04_C25_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Mysidae*, *Squillidae*, *Coenobitidae*, *Palaemonidae*, *Oikopleuridae*, *Paracalanidae* and *Callianassidae* (variables are sorted from the strongest).

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The **dimension 10** opposes individuals such as *X10_X06_F38_18S_AMB*, *X04_X04_D30_18S_AMB*, *X07_X05_B11_18S_AMB* and *X07_X05_A9_18S_AMB* (to the top of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X07_X05_A3_18S_AMB*, *X017_X07_Y9a_18S_AMB* and *X07_X05_A1_18S_AMB* (to the bottom of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X10_X06_F38_18S_AMB*, *X04_X04_D30_18S_AMB* and *X07_X05_B11_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Pandalidae*, *Scombridae*, *Salpidae*, *Cypraeidae*, *Lysiosquillidae* and *Pyrosomatidae* (variables are sorted from the strongest).

The group in which the individual *X07_X05_A9_18S_AMB* stands (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Sphaeronectidae*, *Lysiosquillidae* and *Sphenopidae* (variables are sorted from the strongest).
- low values for the variables *Metridinidae*, *Aetideidae* and *Acartiidae* (variables are sorted from the weakest).

The group 3 (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Metridinidae*, *Acartiidae*, *Scolecitrichidae* and *Euphausiidae* (variables are sorted from the strongest).
- low values for the variables *Doliolidae*, *Sagittidae*, *Lysiosquillidae* and *Sphaeronectidae* (variables are sorted from the weakest).

The group in which the individuals *X07_X05_A3_18S_AMB*, *X017_X07_Y9a_18S_AMB* and *X07_X05_A1_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Typhloscolecidae*, *Centropagidae*, *Cerianthidae*, *Subeucalanidae*, *Synaptidae*, *Doliolidae*, *Sapphirinidae*, *Nausithoidae*, *Hormathiidae* and *Creseidae* (variables are sorted from the strongest).

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## 8. Description of the dimension 11

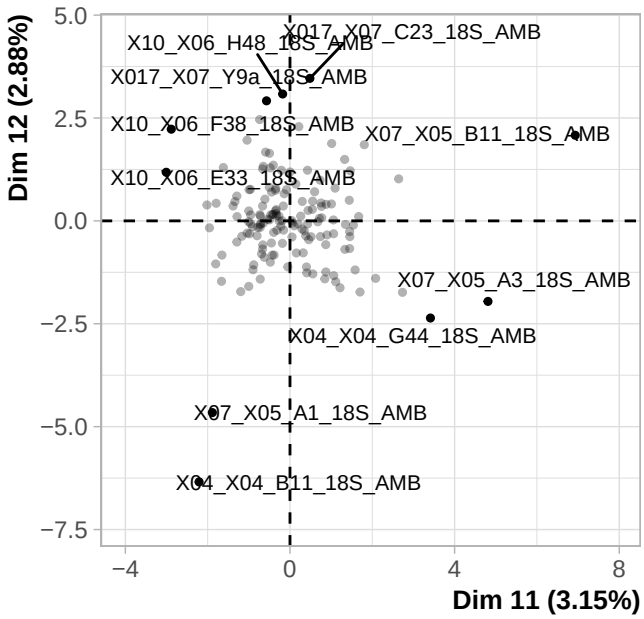


**Figure 8.1 - Individuals factor map (PCA)** *The labeled individuals are those with the higher contribution to the plane construction.*

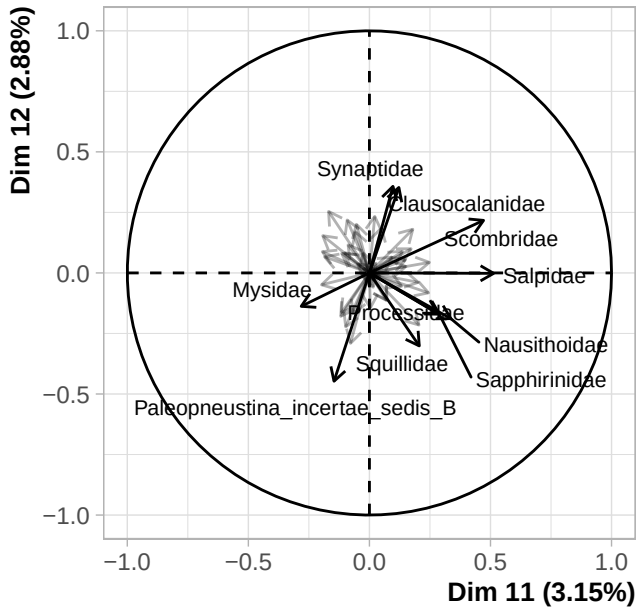


**Figure 8.2 - Variables factor map (PCA)** *The labeled variables are those the best shown on the plane.*

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The **dimension 11** opposes individuals such as *X07_X05_B11_18S_AMB*, *X07_X05_A3_18S_AMB* and *X04_X04_G44_18S_AMB* (to the right of the graph, characterized by a strongly positive coordinate on the axis) to individuals such as *X04_X04_B11_18S_AMB*, *X07_X05_A1_18S_AMB* and *X10_X06_E33_18S_AMB* (to the left of the graph, characterized by a strongly negative coordinate on the axis).

The group in which the individuals *X07_X05_B11_18S_AMB*, *X07_X05_A3_18S_AMB* and *X04_X04_G44_18S_AMB* stand (characterized by a positive coordinate on the axis) is sharing :

- high values for the variables *Sapphirinidae*, *Squillidae*, *Palaemonidae*, *Salpidae*, *Processidae*, *Nausithoidae*, *Scombridae* and *Typhloscolecidae* (variables are sorted from the strongest).
- low values for the variable *Oikopleuridae*.

The group in which the individuals *X04_X04_B11_18S_AMB*, *X07_X05_A1_18S_AMB* and *X10_X06_E33_18S_AMB* stand (characterized by a negative coordinate on the axis) is sharing :

- high values for the variables *Geryoniidae*, *Mysidae*, *Doliolidae* and *Hormathiidae* (variables are sorted from the strongest).
- low values for the variables *Clausocalanidae*, *Corycaeidae*, *Heterorhabdidae*, *Calanidae*, *Metridinidae*, *Sapphirinidae*, *Pontellidae*, *Synaptidae* and *Scolecitrichidae* (variables are sorted from the weakest).

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## 9. Classification

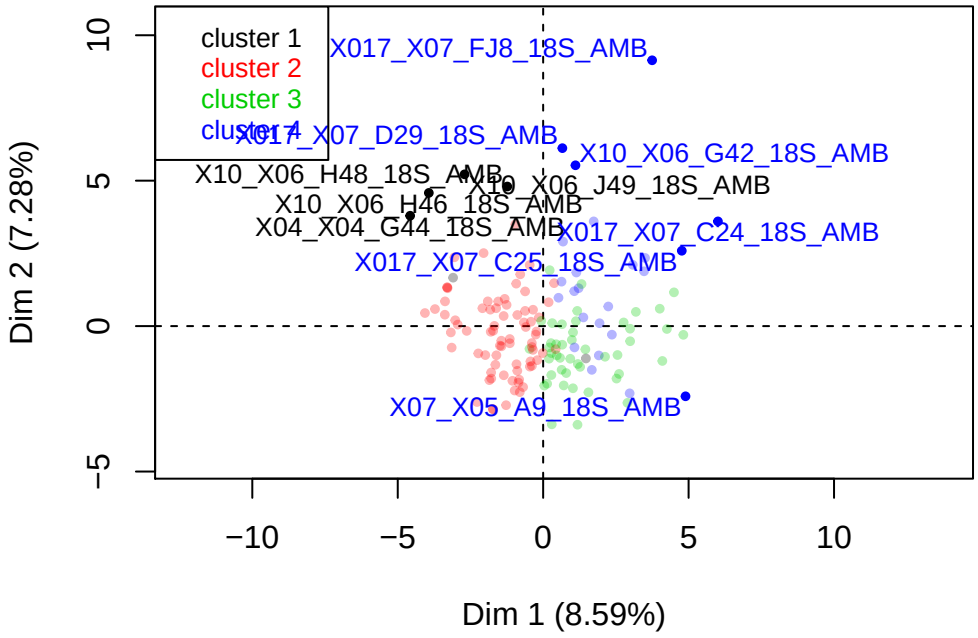


**Figure 9 - Ascending Hierarchical Classification of the individuals.** *The classification made on individuals reveals 4 clusters.*

The **cluster 1** is made of individuals such as *X04_X04_G44_18S_AMB*, *X10_X06_H46_18S_AMB*, *X10_X06_H48_18S_AMB* and *X10_X06_J49_18S_AMB*. This group is characterized by :

- variables whose values do not differ significantly from the mean.

The **cluster 2** is made of individuals sharing :

- variables whose values do not differ significantly from the mean.

The **cluster 3** is made of individuals sharing :

- variables whose values do not differ significantly from the mean.

The **cluster 4** is made of individuals such as *X017_X07_C24_18S_AMB*, *X017_X07_C25_18S_AMB*, *X017_X07_D29_18S_AMB*, *X017_X07_FJ8_18S_AMB*, *X07_X05_A9_18S_AMB* and *X10_X06_G42_18S_AMB*. This group is characterized by :

- variables whose values do not differ significantly from the mean.

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## Annexes