

# Blue mussel shell shape plasticity and natural environments: a quantitative approach

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## Supplementary Codes and Dataset – files description

**File 1 name:** *mussel.leven.coo.rda*

**Title:** Extracted shell outlines (System 3, Loch Leven)

**Description:** The file includes the extracted shell outlines for *Mytilus* specimens (System 3). Outlines are stored as a list of outline pixel coordinates (“Coo” object, .rda file extension) that can be accessed through the Momocs package (Bonhomme et al. 2014, J. Stat. Softw.) with the R software.

**File 2 name:** *mussel.batlic.coo.rda*

**Title:** Extracted shell outlines (System 2, Baltic region)

**Description:** The file includes the extracted shell outlines for *Mytilus* specimens (System 2). Outlines are stored as a list of outline pixel coordinates (“Coo” object, .rda file extension) that can be accessed through the Momocs package (Bonhomme et al. 2014, J. Stat. Softw.) with the R software.

**File 3 name:** *mussel.coo.rda*

**Title:** Extracted shell outlines (System 1 and Global, Europe and North Atlantic)

**Description:** The file includes the extracted shell outlines for *Mytilus* specimens (System 1, Global). Outlines are stored as a list of outline pixel coordinates (“Coo” object, .rda file extension) that can be accessed through the Momocs package (Bonhomme et al. 2014, J. Stat. Softw.) with the R software.

**File 4 name:** *grouping.fac.LL.txt*

**Title:** Grouping factors for list of coordinates (System 3, Loch Leven)

**Description:** The data frame includes explanatory variables (grouping factors and covariates) going along with the extracted coordinates of *Mytilus* shell outlines (System 3).

**File 5 name:** *grouping.fac.BS.txt*

**Title:** Grouping factors for list of coordinates (System 2, Baltic region)

**Description:** The data frame includes explanatory variables (grouping factors and covariates) going along with the extracted coordinates of *Mytilus* shell outlines (System 2).

**File 6 name:** *grouping.fac.txt*

**Title:** Grouping factors for list of coordinates (System 1 and Global, Europe and North Atlantic)

**Description:** The data frame includes explanatory variables (grouping factors and covariates) going along with the extracted coordinates of *Mytilus* shell outlines (System1, Global).

**File 7 name:** *mussel.leven.df.txt*

**Title:** Data frame for morphometrics and statistical analyses (System 3, Loch Leven)

**Description:** The data frame includes morphometrics variables (principal components and traditional morphometrics) and environmental parameters for *Mytilus* specimens (System 3) used for statistical analyses.

**File 8 name:** *mussel.baltic.df.txt*

**Title:** Data frame for morphometrics and statistical analyses (System 2, Baltic region)

**Description:** The data frame includes morphometrics variables (principal components and traditional morphometrics) and environmental parameters for *Mytilus* specimens (System 2) used for statistical analyses.

**File 9 name:** *mussel.europe.df.txt*

**Title:** Data frame for morphometrics and statistical analyses (System 1, Europe and North Atlantic)

**Description:** The data frame includes morphometrics variables (principal components and traditional morphometrics) and environmental parameters for *Mytilus* specimens (System 1) used for statistical analyses.

**File 10 name:** *mussel.df.txt*

**Title:** Data frame for morphometrics and statistical analyses (Global, Europe and North Atlantic)

**Description:** The data frame includes morphometrics variables (principal components and traditional morphometrics) and environmental parameters for *Mytilus* specimens (Global) used for statistical analyses.

**File 11 name:** *Supplementary Code S1.pdf*

**Title:** R script markdown report (System 3, Loch Leven)

**Description:** Commented script for the morphometrics and statistical analyses with the R software (System 3).

**File 12 name:** *Supplementary Code S2.pdf*

**Title:** R script markdown report (System 2, Baltic region)

**Description:** Commented script for the morphometrics and statistical analyses with the R software (System 2).

**File 13 name:** *Supplementary Code S3.pdf*

**Title:** R script markdown report (System 1, Europe and North Atlantic)

**Description:** Commented script for the morphometrics and statistical analyses with the R software (System 1).

**File 14 name:** *Supplementary Code S4.pdf*

**Title:** R script markdown report (Global, Europe and North Atlantic)

**Description:** Commented script for the morphometrics and statistical analyses with the R software (Global).

**File 15 name:** *Utility functions.R*

**Title:** VIF function code

**Description:** R code used for calculation of the variance inflation factor (VIF).