

## Analysis 5 R. 1

Description : Species abundance and locality abundance through the time  
Displayed as : (005) Species abundance, locality abundance and sa divided by la  
Output values : AW005.DAT  
Output chart : AC005.PRF

### Options

*Calculate SA\*10/LA instead of SA/LA (output)* - If the amount of data is low, it is difficult to see a trend, when the species abundance (SA) is divided by the locality abundance (LA).

*Count only localities (LA) with indications* - This is recommended if localities were recorded without indications, or PaleoTax is used to record various organism groups using the pooling option.

### Remarks

Species abundance : Number of indications according to the time (refers to age boundaries)

Locality abundance : Number of localities according to the time (refers to age boundaries)

SA divided by LA : is the value high, the number of species per locality is high. Normally both SA and LA correlate.

## Analysis 6 R. 1

Description : Numerical development of genera which originated in a specified time interval  
Displayed as : (006) Development of Genera  
Output chart : AC006.PRF

### Options

Same questions when the range of genera is calculated, because you may have the latter under different criteria:

*Suppress monospecific genera* - excludes all genera from the analysis, to which only one species is assigned. If this option is set, the results are much clearer.

*Suppress open determined species* - if marked, species in open nomenclature ("sp.") are excluded from the analysis (and do not count as species).

### Remarks

You need to configure the time raster. If all age boundaries are used for this analysis, the results are not clear. Approximately 10 to 20 boundaries are recommended. Choose **Configure** and mark the appropriate items in both columns with TRUE. The distance should be equal. If the examined time span is 100 ma, and you will choose 20 values, you should select the age boundaries each 5 ma.

You get only a chart, not a file with data (in preparation). One colour represent the genera which originated in the same time interval.

## Analysis 7 R. 1

Description : Numerical development of specie which originated in a specified time interval

Displayed as : (007) Development of species

Output chart : AC007.PRF

### Options

*Suppress endemic species* - excludes endemic species. Gives much clearer results.

*Suppress open determined species* - if marked, species in open nomenclature ("sp.") are excluded from the analysis.

### Remarks

You need to configure the time raster. If all age boundaries are used for this analysis, the results are not clear. Approximately 10 to 20 boundaries are recommended. Choose CONFIGURE and mark the appropriate items in both columns with TRUE. The distance should be equal. If the examined time span is 100 ma, and you will choose 20 values, you should select the age boundaries each 5 ma.

You get only a chart, not a file with data (in preparation). One colour represent the species which originated in the same time interval.

## Analysis 8 R. 1

Description : Numeric distribution of species, number of endemic species and rate of endemism

Displayed as : (008) Endemicity of species

Output values : AW008.DAT

Output chart : AC008.PRF

### Options

*Rate of Endemicity multiply with 5 in the chart ?* - If the amount of data is low, a trend is difficult to see if this option is not used.

## Analysis **10** R. 1

Description : Numerical distribution of genera and species, number of species divided by the number of genera

Displayed as : (010) Numerical distribution/proportion of genera/species

Output values : AW010.DAT

Output chart : AC010.PRF

### Options

*Calculate SP\*10/GE instead of SP/GE (output)* - If the amount of data is low, this option gives better results.

## Analysis 13 R. 1

Description : Numerical distribution of the first occurrence of species and the life duration of the species

Displayed as : (013) Life duration of species through the time

Output values : AW013.DAT

Output chart : AC013.PRF

### Options

*Suppress open determined species* - if marked, species in open nomenclature ("sp.") are excluded from the analysis.

*Define the FO-limit (standard is 0) for the output* - Normally, age boundaries are skipped in the output were no new species occur. The limiting value is zero. You may rise this value (5, 10) to skip also age boundaries, were less species (< 6, < 11) originated. This may give more clear results.

## Analysis **15** R. 1

Description : Numerical change of genus richness, based on analysis of originating and disappearing genera

Displayed as : (015) Origination vs. extinction rate in genera

Output values : AW015. DAT

Output chart : AC015.PRF

### Options

Same questions when the range of genera is calculated, because you may have the latter under different criteria:

*Suppress monospecific genera* - excludes all genera from the analysis, to which only one species is assigned. If this option is set, the results are much clearer.

*Suppress open determined species* - if marked, species in open nomenclature ("sp.") are excluded from the analysis (and do not count as species).

## Analysis **16** R. 1

Description : Numerical change of species richness, based on analysis of originating and disappearing species

Displayed as : (016) Development of species

Output values : AW016.DAT

Output chart : AC016.PRF

### Options

*Suppress endemic species* - excludes endemic species. Gives much clearer results.

*Suppress open determined species* - if marked, species in open nomenclature ("sp.") are excluded from the analysis.

## Analysis 21 R. 1

Description : Dating of localities based on the stratigraphy of the indicated species

Displayed as : (021) Date faunas (by species)

Output values : AW021.DAT

Output chart : AC021.PRF

### Remarks

The program is described in detail in LÖSER (2002; Biostratigraphical dating of Cretaceous coral communities using large data sets. *Paläontologische Zeitschrift*, 76, 1: 75-81).

Select at the beginning a locality, for which you like to get a stratigraphic estimation.

This analysis may modify the fields of the species ranges in the database. If you have entered data in these fields, and you do not allow the modification of this fields, you may date a fauna only, if its data are not used to determine the range of the species.

If you are asked : *Attention : this assessment will modify the stratigraphy of species ! Allow ?* you should only click on **Yes** if you need to recalculate the range of the species without the locality which need to be dated.

You should click on **No** if the concerned locality is excluded anyway (e.g. by a tag in the field Suppress).