

# classwork-3-7

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```
library(paleotree)
```

```
## Loading required package: ape
```

```
data(graptPBDB)
```

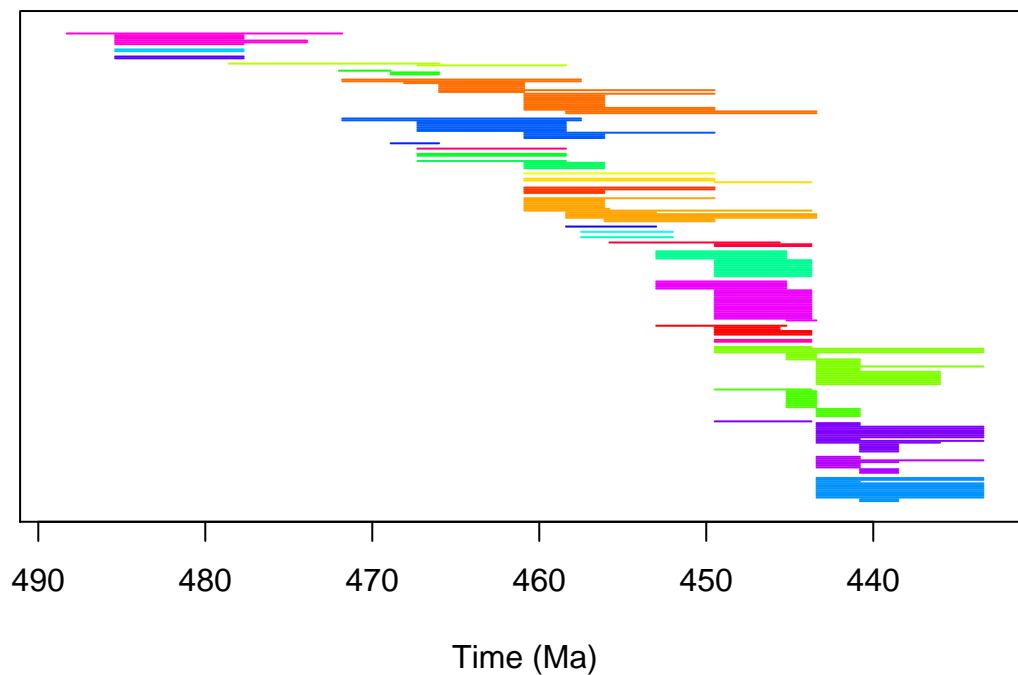
```
head(graptOccPBDB)
```

```
##      occurrence_no record_type reid_no obsolete collection_no
## 1          1669   occurrence      NA      NA           215
## 2          2186   occurrence      NA      NA           256
## 3          2216   occurrence      NA      NA           258
## 4          2217   occurrence      NA      NA           258
## 5          2318   occurrence      NA      NA           270
## 6          2319   occurrence      NA      NA           270
##      identified_name identified_rank identified_no taxonomic_reason
## 1 Chaunograptus sp.      genus      33800
## 2 Dendrograptus sp.      genus      33551
## 3 Acanthograptus sp.      genus      33536
## 4 Dendrograptus sp.      genus      33551
## 5 Dendrograptus sp.      genus      33551
## 6 Hallograptus sp.      genus      33673
##      accepted_name accepted_rank accepted_no early_interval late_interval
## 1 Chaunograptus      genus      33800      St Davids      St Davids
## 2 Dendrograptus      genus      33551 Trempealeauan Trempealeauan
## 3 Acanthograptus      genus      33536      Cambrian      Cambrian
## 4 Dendrograptus      genus      33551      Cambrian      Cambrian
## 5 Dendrograptus      genus      33551      Tremadoc      Tremadoc
## 6 Hallograptus      genus      33673      Tremadoc      Tremadoc
##      early_age late_age reference_no primary_name primary_reso
## 1      513.0    501.0           13 Chaunograptus
## 2      501.0    485.4           13 Dendrograptus
## 3      541.0    485.4           13 Acanthograptus
## 4      541.0    485.4           13 Dendrograptus
## 5      485.4    477.7           13 Dendrograptus
## 6      485.4    477.7           13 Hallograptus
##      subgenus_name subgenus_reso species_name species_reso subgenus
## 1                                     sp.      NA
## 2                                     sp.      NA
## 3                                     sp.      NA
## 4                                     sp.      NA
## 5                                     sp.      NA
## 6                                     sp.      NA
##      subgenus_no      genus genus_no family family_no      order
## 1      NA Chaunograptus  33800      NA      NA
## 2      NA Dendrograptus  33551      NA Dendroidea
## 3      NA Acanthograptus  33536      NA Dendroidea
## 4      NA Dendrograptus  33551      NA Dendroidea
## 5      NA Dendrograptus  33551      NA Dendroidea
```

```
## 6      NA      Hallograptus      33673      NA Graptoloidea
##  order_no      class class_no      phylum phylum_no      authorizer
## 1      NA Graptolithina      33534 Hemichordata      33518 Sepkoski, J.
## 2      33535 Graptolithina      33534 Hemichordata      33518 Sepkoski, J.
## 3      33535 Graptolithina      33534 Hemichordata      33518 Sepkoski, J.
## 4      33535 Graptolithina      33534 Hemichordata      33518 Sepkoski, J.
## 5      33535 Graptolithina      33534 Hemichordata      33518 Sepkoski, J.
## 6      33606 Graptolithina      33534 Hemichordata      33518 Sepkoski, J.
##      enterer modifier
## 1 Sommers, M. unknown
## 2 Sommers, M. unknown
## 3 Sommers, M. unknown
## 4 Sommers, M. unknown
## 5 Sommers, M. unknown
## 6 Sommers, M. unknown
```

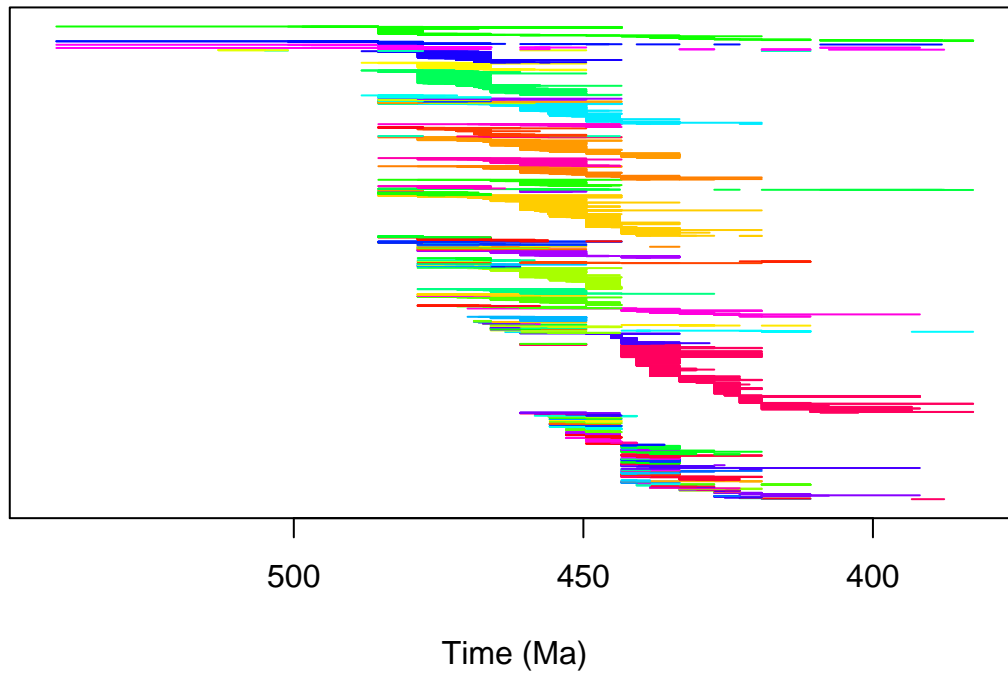
```
occSpecies <- taxonSortPBDBocc(graptOccPBDB, rank = "species")
plotOccData(occSpecies)
```

## Age Uncertainty of Occurrence Data



```
occGenus <- taxonSortPBDBocc(graptOccPBDB, rank = "genus")
plotOccData(occGenus)
```

## Age Uncertainty of Occurrence Data



```
data(retiolitinae)  
taxicDivDisc(retioRanges)
```

