Worldclim data

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Climatic variables from worldclim.org.

```r
w <- raster::getData("worldclim", var="bio", res=2.5)
library(terra)
```

```
## terra 1.5.21
```

```r
w <- rast(w)
```

Retrieve annual mean temperature (bio1) and annual total precipitation (bio12).

```r
t_mean <- subset(w,"bio1")/10        # Correct ºC units.
p_total <- subset(w,"bio12")
names(t_mean) <- "t_mean"
names(p_total) <- "p_total"
```

Retrieve also a DEM model.

```r
dem <- raster::getData("worldclim", var="alt", res=2.5)
dem <- rast(dem)
names(dem) <- "dem"
```

Load Eurasian jay data to use its extent.

```r
library(sf)
```

```
## Linking to GEOS 3.9.1, GDAL 3.2.1, PROJ 7.2.1; sf_use_s2() is TRUE
```

```r
pxy <- st_read("Eurasian jay.gpkg", quiet = T)
```

Crop climatic variables allowing for a small extra spatial extent on all sides.

```r
t_mean <- crop(t_mean, ext(pxy) + 1)
p_total <- crop(p_total,ext(pxy) + 1)
dem <- crop(dem,ext(pxy) + 1)
```
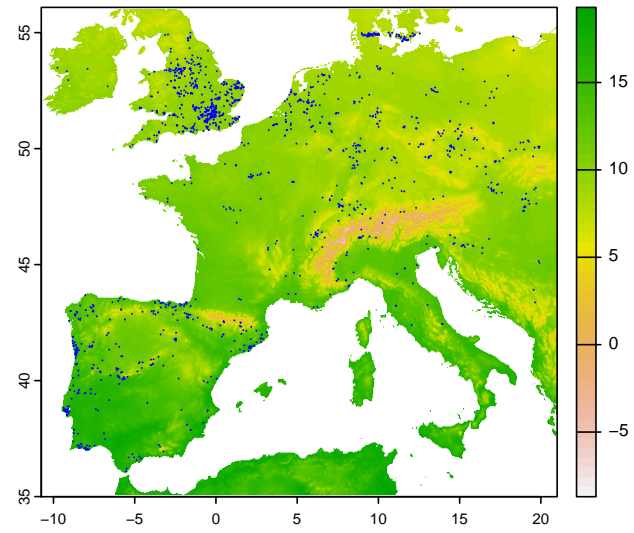
Have a look at maps and locations.

```r
par(mfrow=c(2,2))
plot(t_mean,main="Temperature (ºC)")
plot(pxy,add=T,col="blue",pch=16,cex=.2)
plot(t_mean,main="Precipitation (mm)")
```

```r
plot(pxy,add=T,col="blue",pch=16,cex=.2)
plot(dem,main="DEM (m)")
plot(pxy,add=T,col="blue",pch=16,cex=.2)
par(mfrow=c(1,1))
```
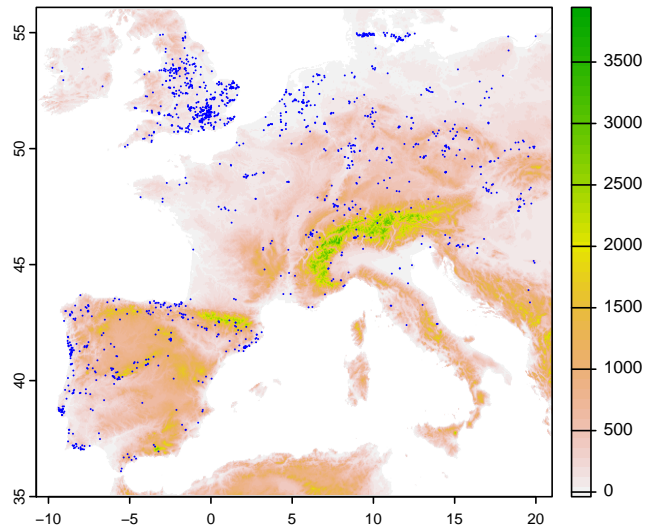
Temperature (ºC)
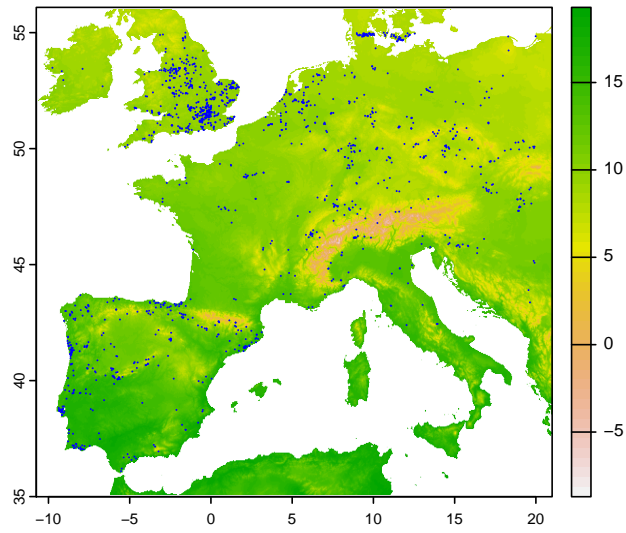
Precipitation (mm)

DEM (m)

Write on disk as tiff files.

```r
writeRaster(t_mean,filename="Annual mean temperature.tif", overwrite=T)
writeRaster(p_total,filename="Annual total precipitation.tif", overwrite=T)
writeRaster(dem,filename="DEM.tif", overwrite=T)
```