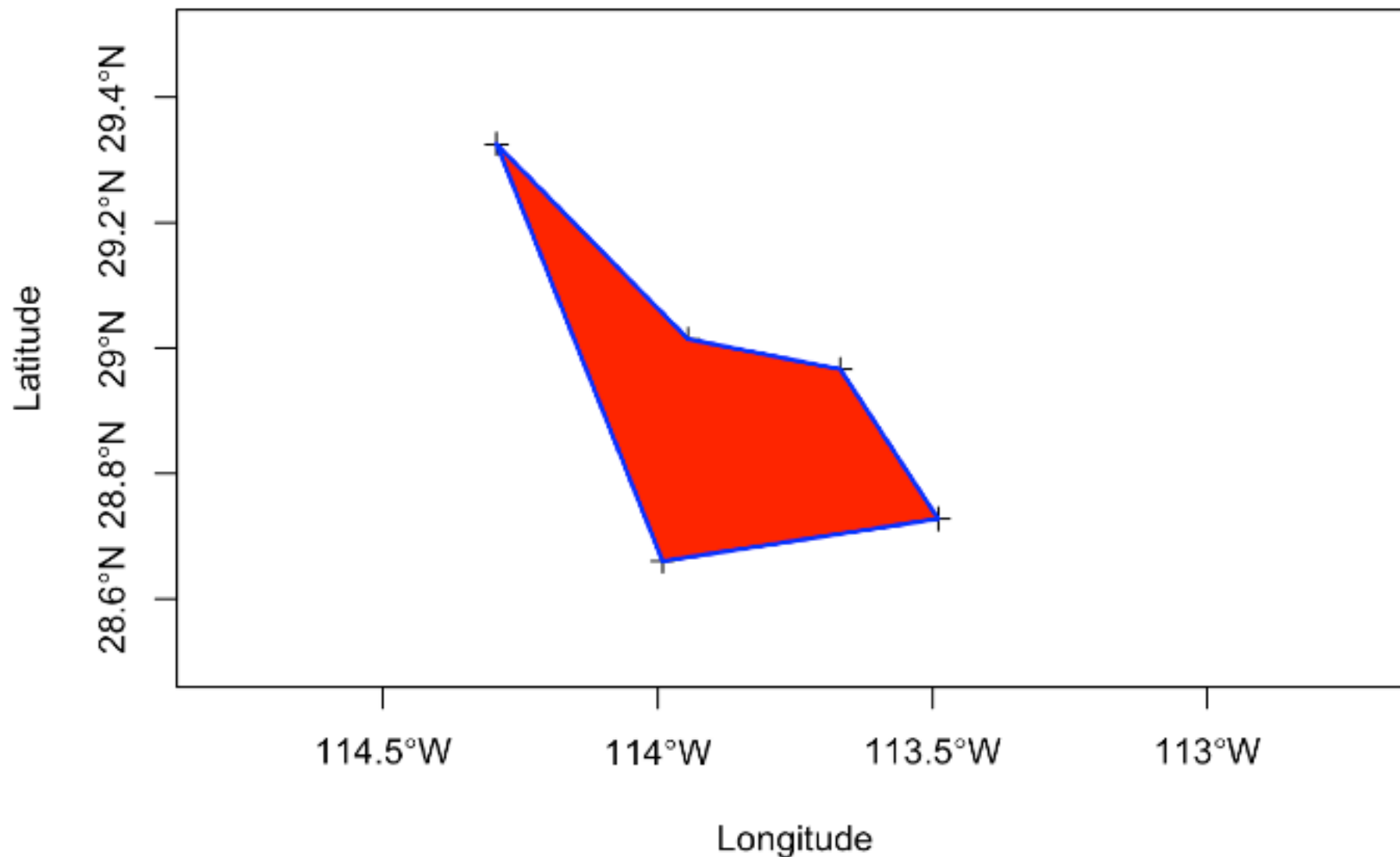


Overlaying Polygon Objects

```
plot( pts, axes=TRUE, xlab="Longitude", ylab="Latitude",  
      ylim=c(28.5,29.5), xlim=c(-114.5, -113))  
plot( SPs, col="red", border="blue", lwd=2, add=TRUE )
```



SpatialPolygonsDataFrame



```
graph TD; Polygon --> Polygons; Polygons --> SpatialPolygons; SpatialPolygons --> SpatialPolygonsDataFrame
```

The diagram illustrates the relationship between different spatial data structures. It starts with a single 'Polygon', which is a collection of 'Polygons'. These 'Polygons' are then organized into 'SpatialPolygons', which finally leads to the 'SpatialPolygonsDataFrame'.

```
df <- data.frame( Populations=paste(coords$Stratum[1:5],collapse=", "),
                  row.names = "Bob")
```

```
SPDF <- SpatialPolygonsDataFrame( SPs, df)
```

```
SPDF
```

Same ID(s) as Polygons

```
## class      : SpatialPolygonsDataFrame
```

```
## features   : 1
```

```
## extent     : -114.2935, -113.4897, 28.66056, 29.32541 (xmin, xmax, ymin, ymax)
```

```
## coord. ref.: +proj=longlat +datum=WGS84 +no_defs +ellps=WGS84 +towgs84=0,0,0
```

```
## variables  : 1
```

```
## names      :      Populations
```

```
## min values : 88, 9, 84, 175, 177
```

```
## max values : 88, 9, 84, 175, 177
```