How to plot points in a map from *ozmaps*

JR Ferrer-Paris (https://github.com/jrfep)

Package `ozmaps` can be used to load simple mapdata for Australia.

Check package documentation at: https://www.rdocumentation.org/packages/ozmaps/versions/0.4.0

Required packages

```
# install.packages(c("ozmaps"))
require(ozmaps)
```

```
## Loading required package: ozmaps
```

```
require(ggplot2)
```

```
## Loading required package: ggplot2
```

```
require(dplyr)
```

```
## Loading required package: dplyr
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

Reproducible data

Extract map data for a single state from the `ozmap_states` data:

```
ozmap_states %>% filter(NAME=='Queensland') -> Queensland_map
```

Create a tibble with the point data (coordinates must be in the same geographic projection as the map)
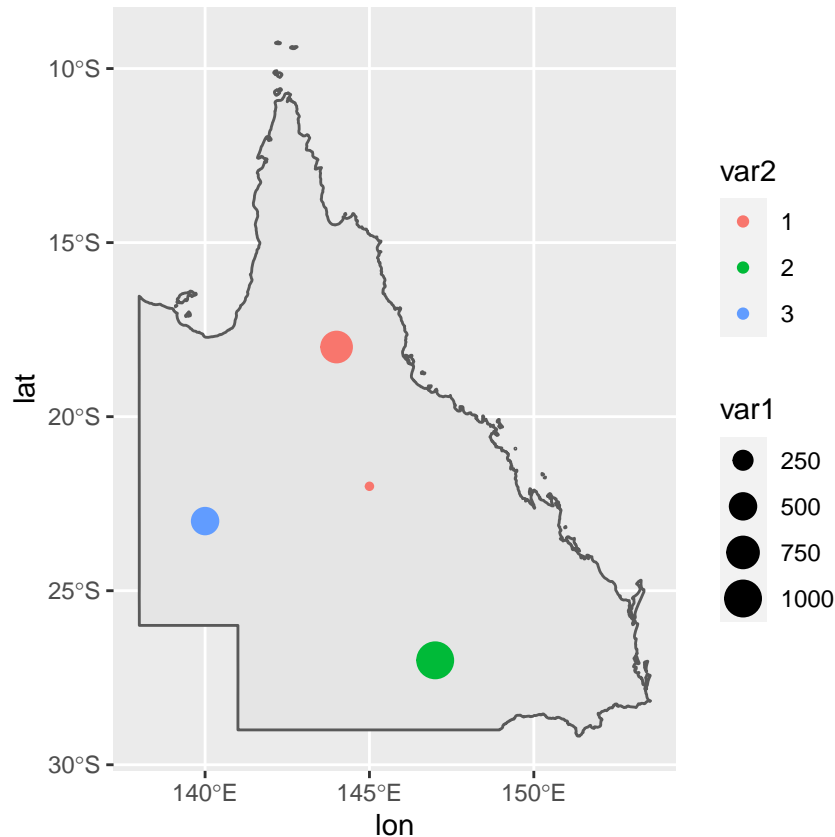
```
locations <- tibble(lon=c(144,145,147,140),
                    lat=c(-18,-22,-27,-23),
                    var1=c(700,100,1000,500),
                    var2=factor(c(1,1,2,3)))
```

Solution

Very simple map with outline and data points:

```
ggplot() +
  geom_sf(data = Queensland_map, show.legend = FALSE) +
```

```
coord_sf() +
geom_point(data=locations,aes(x=lon,y=lat,size=var1,color=var2))
```


Solution adapted from: https://ggplot2-book.org/maps.html

Debugging info

Check the R session info:

```
sessionInfo()
```

```
## R version 4.1.0 (2021-05-18)
## Platform: x86_64-apple-darwin17.0 (64-bit)
## Running under: macOS Big Sur 10.16
##
## Matrix products: default
## BLAS:   /Library/Frameworks/R.framework/Versions/4.1/Resources/lib/libRblas.dylib
## LAPACK: /Library/Frameworks/R.framework/Versions/4.1/Resources/lib/libRlapack.dylib
##
## locale:
## [1] en_AU.UTF-8/en_AU.UTF-8/en_AU.UTF-8/C/en_AU.UTF-8/en_AU.UTF-8
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] dplyr_1.0.7   ggplot2_3.3.4 ozmaps_0.4.0
```

```
## 
## loaded via a namespace (and not attached):
##  [1] Rcpp_1.0.6         highr_0.9          compiler_4.1.0    pillar_1.6.1
##  [5] class_7.3-19       tools_4.1.0        digest_0.6.27      gtable_0.3.0
##  [9] evaluate_0.14      lifecycle_1.0.0    tibble_3.1.2       pkgconfig_2.0.3
## [13] rlang_0.4.11       DBI_1.1.1          yaml_2.2.1         xfun_0.24
## [17] e1071_1.7-7        s2_1.0.6           withr_2.4.2        stringr_1.4.0
## [21] knitr_1.33         generics_0.1.0     vctrs_0.3.8        classInt_0.4-3
## [25] grid_4.1.0         tidyselect_1.1.1   glue_1.4.2         sf_1.0-0
## [29] R6_2.5.0           fansi_0.5.0        oz_1.0-21          rmarkdown_2.9
## [33] farver_2.1.0       purrr_0.3.4        magrittr_2.0.1     scales_1.1.1
## [37] htmltools_0.5.1.1  ellipsis_0.3.2     units_0.7-2        colorspace_2.0-1
## [41] labeling_0.4.2     KernSmooth_2.23-20 utf8_1.2.1         stringi_1.6.2
## [45] proxy_0.4-26       wk_0.4.1           munsell_0.5.0      crayon_1.4.1
```