

Package: ggsegHistorical (via r-universe)

May 23, 2026

Title Historical Brain Atlases for the 'ggseg' Ecosystem

Version 1.0.0

Description Six historical cortical brain atlases digitally reconstructed by Pijnenburg et al. (2021) [doi:10.1016/j.neuroimage.2021.118274](https://doi.org/10.1016/j.neuroimage.2021.118274) from the Dutch Connectome Lab. Includes Brodmann (1909), Campbell (1905), Economo & Koskinas (1925), Flechsig (1920), Kleist (1934), and Smith (1907). Each atlas provides a unified 'ggseg_atlas' object with both 2D polygon geometry and 3D vertex indices, for use with 'ggseg' and 'ggseg3d'.

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Encoding UTF-8

Depends R (>= 3.5)

Imports ggseg.formats

Suggests ggseg, ggseg3d, ggplot2, knitr, rmarkdown, testthat (>= 3.0.0), vdiff

Remotes ggsegverse/ggseg

URL <https://github.com/ggsegverse/ggsegHistorical>

BugReports <https://github.com/ggsegverse/ggsegHistorical/issues>

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.3

Config/testthat/edition 3

Config/Needs/website ggsegverse/ggseg.docs

Config/pak/sysreqs libabsl-dev cmake libgdal-dev gdal-bin libgeos-dev libicu-dev libssl-dev libproj-dev libsqlite3-dev libudunits2-dev

Repository <https://ggsegverse.r-universe.dev>

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RemoteUrl <https://github.com/ggsegverse/ggsegHistorical>

RemoteRef HEAD

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brodmann	<i>Brodmann Areas Atlas (1909)</i>
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Description

Brain atlas for the Brodmann areas cortical parcellation with 39 regions per hemisphere. Contains both 2D polygon geometry for `ggseg::geom_brain()` and 3D vertex indices for `ggseg3d::ggseg3d()`.

Usage

```
brodmann()
```

Value

A `ggseg.formats::ggseg_atlas` object (cortical).

References

Brodmann K (1909). Vergleichende Lokalisationslehre der Grosshirnrinde. Leipzig: Johann Ambrosius Barth.

Pijnenburg R, et al. (2021). Myelo- and cytoarchitectonic microstructural and functional human cortical atlases reconstructed in common MRI space. *NeuroImage*, 239, 118274. doi:10.1016/j.neuroimage.2021.118274

See Also

Other `ggseg_atlases`: `campbell()`, `economo()`, `flechsig()`, `kleist()`, `smith()`

Other `cortical_atlases`: `campbell()`, `economo()`, `flechsig()`, `kleist()`, `smith()`

Other `historical_atlases`: `campbell()`, `economo()`, `flechsig()`, `kleist()`, `smith()`

Examples

```
brodmann()
plot(brodmann())
```

`campbell`*Campbell Cortical Atlas (1905)*

Description

Brain atlas for the Campbell (1905) cortical parcellation with 17 regions per hemisphere. Contains both 2D polygon geometry for `ggseg::geom_brain()` and 3D vertex indices for `ggseg3d::ggseg3d()`.

Usage

```
campbell()
```

Value

A `ggseg.formats::ggseg_atlas` object (cortical).

References

Campbell A.W. (1905). Histological studies on the localisation of cerebral function. Cambridge University Press.

Pijnenburg R, et al. (2021). Myelo- and cytoarchitectonic microstructural and functional human cortical atlases reconstructed in common MRI space. *NeuroImage*, 239, 118274. doi:10.1016/j.neuroimage.2021.118274

See Also

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Other `cortical_atlases`: `brodmann()`, `economo()`, `flechsig()`, `kleist()`, `smith()`

Other `historical_atlases`: `brodmann()`, `economo()`, `flechsig()`, `kleist()`, `smith()`

Examples

```
campbell()  
plot(campbell())
```

`economo`*Economo & Koskinas Cytoarchitectonic Atlas (1925)*

Description

Brain atlas based on the historical Economo & Koskinas 1925 cytoarchitectonic parcellation with 15 regions per hemisphere. Contains both 2D polygon geometry for `ggseg::geom_brain()` and 3D vertex indices for `ggseg3d::ggseg3d()`.

Usage

```
economo()
```

Value

A `ggseg.formats::ggseg_atlas` object (cortical).

References

C.F. von Economo, G.N. Koskinas; Die Cytoarchitektonik Der Hirnrinde Des Erwachsenen Menschen; J. Springer (1925)

Pijnenburg R, et al. (2021). Myelo- and cytoarchitectonic microstructural and functional human cortical atlases reconstructed in common MRI space. *NeuroImage*, 239, 118274. doi:10.1016/j.neuroimage.2021.118274

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Other `historical_atlases`: `brodmann()`, `campbell()`, `flechsig()`, `kleist()`, `smith()`

Examples

```
economo()  
plot(economo())
```

flechsig

Flechsig Myelogenetic Atlas (1920)

Description

Brain atlas for the Flechsig myelogenetic cortical parcellation with 46 regions per hemisphere. Contains both 2D polygon geometry for `ggseg::geom_brain()` and 3D vertex indices for `ggseg3d::ggseg3d()`.

Usage

```
flechsig()
```

Value

A `ggseg.formats::ggseg_atlas` object (cortical).

References

Flechsig P (1920). Anatomie des menschlichen Gehirns und Rückenmarks auf myelogenetischer Grundlage. Leipzig: Georg Thieme.

Pijnenburg R, et al. (2021). Myelo- and cytoarchitectonic microstructural and functional human cortical atlases reconstructed in common MRI space. *NeuroImage*, 239, 118274. doi:10.1016/j.neuroimage.2021.118274

See Also

Other ggseg_atlases: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [kleist\(\)](#), [smith\(\)](#)

Other cortical_atlases: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [kleist\(\)](#), [smith\(\)](#)

Other historical_atlases: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [kleist\(\)](#), [smith\(\)](#)

Examples

```
flechsig()
plot(flechsig())
```

kleist

Kleist Functional Segregation Atlas (1934)

Description

Brain atlas for the historical Kleist 1934 functional segregation with 49 regions per hemisphere.

Contains both 2D polygon geometry for `ggseg::geom_brain()` and 3D vertex indices for `ggseg3d::ggseg3d()`.

Usage

```
kleist()
```

Value

A `ggseg.formats::ggseg_atlas` object (cortical).

References

Kleist K. (1934) Gehirnpathologie vornehmlich auf Grund der Kriegserfahrungen. Leipzig: Barth.

Pijnenburg R, et al. (2021). Myelo- and cytoarchitectonic microstructural and functional human cortical atlases reconstructed in common MRI space. *NeuroImage*, 239, 118274. doi:10.1016/j.neuroimage.2021.118274

See Also

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Other cortical_atlases: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [flechsig\(\)](#), [smith\(\)](#)

Other historical_atlases: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [flechsig\(\)](#), [smith\(\)](#)

Examples

```
kleist()  
plot(kleist())
```

smith

Smith Cortical Atlas (1907)

Description

Brain atlas for the Smith 1907 cortical parcellation. Contains both 2D polygon geometry for `ggseg::geom_brain()` and 3D vertex indices for `ggseg3d::ggseg3d()`.

Usage

```
smith()
```

Value

A `ggseg.formats::ggseg_atlas` object (cortical).

References

G.E. Smith; A new topographical survey of the human cerebral cortex, being an account of the distribution of the anatomically distinct cortical areas and their relationship to the cerebral sulci; J. Anat. Physiol., 41 (Pt 4) (1907), p. 237

Pijnenburg R, et al. (2021). Myelo- and cytoarchitectonic microstructural and functional human cortical atlases reconstructed in common MRI space. *NeuroImage*, 239, 118274. doi:10.1016/j.neuroimage.2021.118274

See Also

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Other `cortical_atlases`: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [flechsig\(\)](#), [kleist\(\)](#)

Other `historical_atlases`: [brodmann\(\)](#), [campbell\(\)](#), [economo\(\)](#), [flechsig\(\)](#), [kleist\(\)](#)

Examples

```
smith()  
plot(smith())
```

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