

1    **Supplementary Data S1:** Landmark descriptions used in this study (modified from [30]) and

2    positions on *Tethysaurus* endocast in dorsal and left lateral views.

Number	Definition of landmarks
1	Anterior-most dorsal end of the endocast
2	Lateral-most extent of the cast of the olfactory bulbs and peduncles
3	Dorso-median extent of the cast of the olfactory bulbs and peduncles
4	Ventro-median extent of the cast of the olfactory bulbs and peduncles
5	Most lateral extent of the cast of the anterior cerebral hemispheres
6	Most dorso-median extent of the cast of the anterior cerebral hemispheres
7	Most ventro-median extent of the cast of the anterior cerebral hemispheres
8	Lateral-most extent of the cast of the cerebral hemispheres
9	Dorso-median extent of the cast of the cerebral hemispheres
10	Most lateral extent of the endocast at the anterior end of the anterior semicircular canal
11	Most dorso-median extent of the endocast at the anterior end of the anterior semicircular canal
12	Ventral most extent of the diencephalic cast
13	Cast of the mesencephalic flexure
14	Dorso-median extent of the endocast between the endosseous labyrinths
15	Lateral most extent of the endocast at the level of the endolymphatic foramen
16	Most ventro-median extent of the rhombencephalic cast
17	Lateral-most extent of the posterior end of the endocast
18	Most dorso-median extent of the posterior end of the endocast
19	Most ventro-median extent of the posterior end of the endocast

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