

Radial groups	Pit size	Pit aperture	Ray separate	Most common ray width	Ray height	% strictly uniser	Comments	Ray cell length	Ray cell width	Ray cell height	Radial walls ray cells	Cross-field
yes	6-13 (mean 9 μ m)	circular to oval	2-8 rows trachs	uniser	1 to 25 (mean 9)	89%	some tall rays partly biseriate	48-125 (74 μ m, n=35 sd = 16)	9-25 (15 μ m)	16-28 (22 μ m)	vertical	small oval pits, 2 in CF of small tracheids
yes	5-10 (mean 8 μ m)	circular to oval	1-7 rows	uniser	1 to 20 (mean 7)	84%	some tall rays partly biseriate	n = 5: 65-112 μ m	11-24 (18 μ m)	13-31 (24 μ m)	vertical	1-4, often 2 (up to 6 seen)
?	6-9 (mean 7 μ m)	circular to oval	1-8 rows	uniser	1 to 23 (mean 8) (max obs 33)	80%	some tall rays partly biseriate, a few low rays are biseriate		14-28 (19 μ m)	15-36 (23 μ m)	vertical	usual 2-4 small oval pits (min max 6), 7 x 5 μ m, not super crowded
not seen	6-11 (mean 8 μ m)	circular to oval	2-9 rows	uniser	1 to 19 (mean 8)	96%	some tall rays partly bi (very rare)		8-31 (13 μ m)	10-33 (19 μ m)	vertical	4-6, oval to circular, crowded, probably up to 10 on largest trachs
?	4-10 (mean 6 μ m)	circular to oval	2-7 rows	uniser	1 to 23 (mean 6)	92%	some tall rays partly bi, rare		7-18 (11 μ m)	10-20 (15 μ m)	vertical	1-6 pits, 3-4 more common, 6 x 4 μ m (n=23)
?		circular to oval		uniser	1 to 20 (mean 6)	84%	some tall rays partly bi		6-19 (11 μ m)	8-24 (17 μ m)	vertical	several, small
yes	5-11 (mean 7 μ m)	circular to oval?		uniser	2 to 9 (mean 4)	88%	some partly biseriate		6-17 (11 μ m)	11-26 (19 μ m)	vertical	4-6 crowded (5x4 μ m)
yes?	5-10 (mean 7 μ m)	circular to oval		uniser	2 to 20 (mean 10)	about 96%	some partly biseriate but hard to estimate how many		11-21 (16 μ m)	12-30 (18 μ m)	vertical	several, crowded

Supplemental File 1: Wood taxonomy for Late Permian specimens from Antarctica

Specimen	Tracheid diam. tang. (µm)	Tracheid diam. radial	Ring boundary	Mixed radial pitting	Radial pitting uniser	Radial pitting multiser
17,773	7-31 (mean 18 µm)	6-25 (mean 15 µm) prob biased towards smaller tracheids	none visible	yes	yes, <u>common</u>	very rare
17,774	12-40 (mean 25 µm)	12-42 (mean 23 µm)	none visible	yes	yes, <u>very common</u>	very rare
17,775	8-44 (mean 23 µm)	12-38 (mean 23 µm)	yes (before boundary 21 µm at bound 9 µm after 33 µm_for 20 cells)	yes	yes	yes biseriate common, triseriate rare
17,776	(compressed)	(compressed)	(compressed)	yes	yes, <u>very common</u>	rare, bi to triseriate
17,169	11-31 (mean 19 µm)	11-50 (mean 22-29 µm)	yes (before boundary 22 µm at bound 10 µm after 29 µm)	yes	yes	yes, <u>numerous biseriate and some triseriate</u>
11,617	-	-	-	yes	yes	yes, biseriate, subopposite (only a few seen)
11,472	-	-	-	yes	yes	biseriate <u>common</u>
17,771	-	-	-	yes	yes	biseriate <u>common</u>