

P A U P *

Version 4.0a (build 169) for Microsoft Windows (built on Feb 10 2021 at 22:42:48)

Thu Aug 01 09:11:53 2024

paup> Outgroup Ateleaspis_tessellata;

Outgroup status changed:

1 taxon transferred to outgroup

Total number of taxa now in outgroup = 1

Number of ingroup taxa = 57

paup> set root = outgroup

paup> hsearch Swap=TBR addseq=random Enforce=no NReps=10 Hold=5;

Heuristic search settings:

Optimality criterion = parsimony

Character-status summary:

Of 67 total characters:

All characters are of type 'unord'

All characters have equal weight

4 characters are parsimony-uninformative

Number of parsimony-informative characters = 63

Gaps are treated as "missing"

Starting tree(s) obtained via stepwise addition

Addition sequence: random

Number of replicates = 10

Starting seed = generated automatically

Number of trees held at each step = 5

Branch-swapping algorithm: tree-bisection-reconnection (TBR) with reconnection limit = 8

Steepest descent option not in effect

Initial 'Maxtrees' setting = 100

Branches collapsed (creating polytomies) if maximum branch length is zero

'MulTrees' option in effect

No topological constraints in effect

Trees are unrooted

Enter new value for 'Maxtrees' (200):1000

Action if limit is hit:

(1) Prompt for new value

(2) Automatically increase by 100 (= AUTOINC)

(3) Leave unchanged, and don't prompt

(1)>2

Elapsed time	AddSeq rep	Taxa added	Rearr. tried	-- Number of trees -- saved to swap	----- Best trees ----- this rep overall
0:01:00	7	-	267566863	2160 1845	217 216
0:02:00	8	-	553071195	20155 11145	217 216
0:03:00	8	-	822493402	35718 12448	217 216
0:03:07	8	-	847528354	5 0	216 216
0:03:49	10	-	1015492504	5 0	216 216

Heuristic search completed

Total number of rearrangements tried = 1015492504

Score of best tree(s) found = 216

Number of trees retained = 5

Time used = 00:03:49 (CPU time = 00:03:38.0)

Tree-island profile:

Island	Size	First tree	Last tree	Score	First replicate	Times hit
1	5	1	5	216	1	10

paup> SaveTrees File=Galeaspid_Test_trees.tre;

5 trees saved to file "C:\Users\richard.dearden\Documents\Reviews\Dunyu_Galeaspid\Galeaspid_Test_trees.tre"

paup> ConTree All / Strict=yes Majrule=no TreeFile=Galeaspid_Test_Strict.tre;

```
Action if limit is hit:
(1) Prompt for new value
(2) Automatically increase by 100 (= AUTOINC)
(3) Leave unchanged, and don't prompt
(1)>2
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Elapsed time	AddSeq rep	Taxa added	Rearr. tried	-- Number of trees -- saved to swap	----- Best trees ----- this rep overall
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Strict consensus of 5 trees:



