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P A U P *
Version 4.0b10 for Macintosh (PPC)
Thursday, January 24, 2013  6:22 PM

This copy registered to: Ni Xijun
                         IVPP


      ------------------------------NOTICE------------------------------
        This is a beta-test version.  Please report any crashes,
        apparent calculation errors, or other anomalous results.
        There are no restrictions on publication of results obtained
        with this version, but you should check the WWW site
        frequently for bug announcements and/or updated versions.
        See the README file on the distribution media for details.
      ------------------------------------------------------------------

Processing of file "Maridet&Ni_early_cricetid_phylo" begins...

Data matrix has 37 taxa, 67 characters
Valid character-state symbols: 012345
Missing data identified by '?'
Gaps identified by '-'

*** Skipping "NOTES" block

Processing of file "Maridet&Ni_early_cricetid_phylo" completed.

Processing TREES block from file "consensus.trees":
   Keeping: trees from file (replacing trees in memory)
   1 tree read from file
   Time used = 0.00 sec

Outgroup status changed:
  2 taxa transferred to outgroup
  Total number of taxa now in outgroup = 2
  Number of ingroup taxa = 35

Tree description:

  Unrooted tree(s) rooted using outgroup method
  Optimality criterion = parsimony
    Character-status summary:
      Of 67 total characters:
        12 characters are of type 'ord' (Wagner)
        55 characters are of type 'unord'
        All characters have equal weight
        2 characters are parsimony-uninformative
        Number of parsimony-informative characters = 65
    Gaps are treated as "missing"
    Multistate taxa interpretation depends on "{}" versus "()" designation ("min" values
      for CI, RI, and RC are minimum-possible character lengths)

    Character-state optimization: Accelerated transformation (ACCTRAN)

Tree number 1 (rooted using user-specified outgroup)

Tree length = 397
Consistency index (CI) = 0.6272
Homoplasy index (HI) = 0.7834
CI excluding uninformative characters = 0.6253
HI excluding uninformative characters = 0.3747
Retention index (RI) = 0.6234
Rescaled consistency index (RC) = 0.3910

                                                  /------------- Adelomyarion vir
                                                  |
                                                  |       /---- Edirnella kempen
                                              /--70    /--68
                                              |   |    |   \---- Raricricetodon z
                                              |   \---69
                                          /--67       \-------- Oxynocricetodon
                                          |   |
                                      /--66   \----------------- Kerosinia variab
                                      |   |
                                      |   \-------------------- Heterocricetodon
                                      |
                                  /---65                  /---- Pseudocricetodon
                                  |    |               /--63
                                  |    |               |   \---- Ulaancricetodon
                                  |    \---------------64
                                  |                    \-------- Pseudocricetodon
                                  |
                                  |                    /-------- Aralocricetodon
                              /--62                    |
                              |   |       /-----------39   /---- Enginia gertchek
                              |   |       |            \--38
                              |   |       |                \---- Muhsinia steffen
                              |   |       |
                              |   |       |                /---- Cricetops dormit
                              |   |       |            /--40
                              |   \-------46            |   \---- PARACRICETOPS VI
                              |           |       /---41
                              |           |       |   \-------- Deperetomys inte
                              |           |   /--42
                          /--61           |   |   \------------- Meteamys alpani
                          |   |           |   |
                          |   |           \--45           /---- Melissiodon quer
                          |   |               |       /--43
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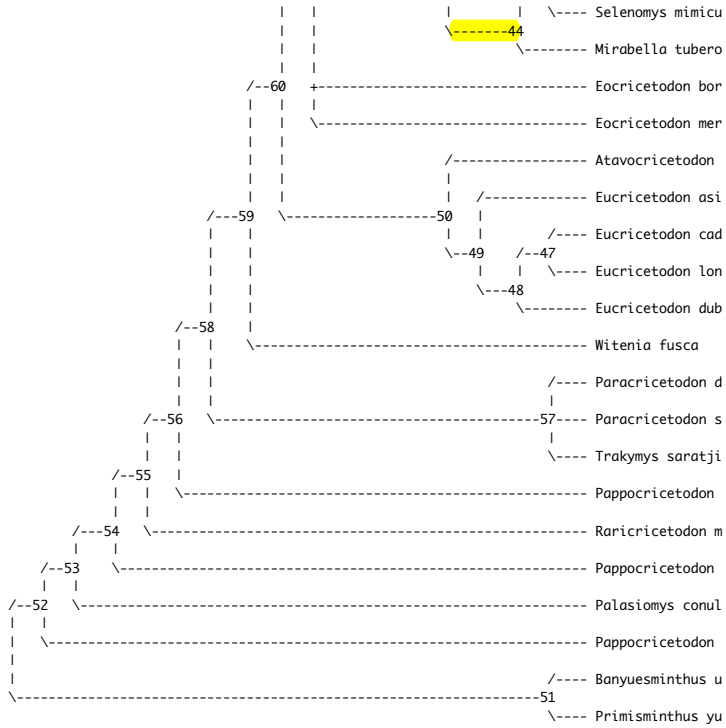

Apomorphy lists:

Branch	Character	Steps	CI	Change
node_51 --> node_52	1 (Lower Incisors, number of)	2	0.750	1 --> 3
	7 (Upper Jaw, zygomatic plat)	1	0.333	0 --> 1
	12 (Lower Jaw, orientation o)	1	0.800	1 --> 2
node_52 --> node_53	18 (M1, presence of protosty)	1	0.667	0 --> 1
	19 (M1, presence of anteroco)	1	1.000	0 --> 1
	22 (M1, protocone spur devel)	1	0.200	0 --> 1
	43 (M2, sinus mesiolabial ex)	1	0.167	0 --> 1
node_53 --> node_54	36 (M2, presence of protocon)	1	0.250	0 --> 1
	50 (m1 protoconid position)	1	0.375	1 --> 0
	65 (m3 length relative to m1)	1	0.182	1 --> 2
	67 (m3, presence of metaloph)	1	0.333	0 --> 1
node_54 --> node_55	5 (Upper P4 presence)	1	1.000	1 --> 0
	28 (M1, presence of protocon)	1	0.500	0 --> 1
	32 (M1, presence of mesial l)	1	1.000	0 --> 1
	35 (M2 presence of anterolop)	1	0.833	0 --> 1
	56 (m1, development of hypol)	1	0.667	0 --> 1
node_55 --> node_56	40 (M2, presence of protocon)	1	0.333	1 --> 0
	55 (m1, presence of mesoconi)	1	0.542	2 --> 1
	61 (m2, presence of metaloph)	1	1.000	0 --> 1
node_56 --> node_58	12 (Lower Jaw, orientation o)	1	0.800	2 --> 1
	25 (M1, presence of protocon)	1	0.667	1 --> 0
	26 (M1, presence of distal p)	1	0.833	0 --> 1
	30 (M1, entoloph orientation)	1	0.700	0 --> 2
	50 (m1 protoconid position)	1	0.375	0 --> 1
	51 (m1, presence of metaconi)	1	0.600	0 --> 1
	59 (m1, development of ectol)	1	0.875	0 --> 1
	63 (m2 presence of hypoconid)	1	0.200	0 --> 1
node_58 --> node_59	23 (M1, presence of mesial p)	1	0.167	1 --> 0
	29 (M1, presence of entoloph)	1	1.000	0 --> 1
	41 (M2, presence of distal p)	1	0.609	0 --> 1
	54 (m1, presence of hypoconi)	1	0.167	0 --> 1
	55 (m1, presence of mesoconi)	1	0.542	1 --> 2
node_59 --> node_60	1 (Lower Incisors, number of)	1	0.750	3 --> 2
	6 (Upper Jaw, zygomatic plat)	1	0.500	0 --> 1
	7 (Upper Jaw, zygomatic plat)	1	0.333	1 --> 0
	28 (M1, presence of protocon)	1	0.500	1 --> 0
	36 (M2, presence of protocon)	1	0.250	1 --> 0
	38 (M2, presence of protocon)	1	1.000	1 --> 0
	39 (M2, presence of entoloph)	1	0.875	0 --> 1
node_60 --> node_61	47 (m1, presence of metaloph)	1	0.556	0 --> 1
	49 (m1, presence of anterolo)	1	0.857	0 --> 1
	54 (m1, presence of hypoconi)	1	0.167	1 ==> 0
	55 (m1, presence of mesoconi)	1	0.542	2 --> 1
	63 (m2 presence of hypoconid)	1	0.200	1 --> 0
	65 (m3 length relative to m1)	2	0.182	2 --> 0
node_61 --> node_62	3 (Lower Incisors, number of)	1	0.444	2 --> 1
node_62 --> node_65	1 (Lower Incisors, number of)	2	0.750	2 --> 0
	3 (Lower Incisors, number of)	1	0.444	1 --> 0
	7 (Upper Jaw, zygomatic plat)	1	0.333	0 --> 1
	10 (Lower Jaw, diastema shap)	1	0.333	0 --> 1
	41 (M2, presence of distal p)	1	0.609	1 --> 2
node_65 --> node_66	13 (Cheek tooth form)	1	0.500	0 --> 1
	24 (M1, presence of labial a)	1	0.250	0 --> 1
	30 (M1, entoloph orientation)	1	0.700	2 --> 0
node_66 --> node_67	21 (M1, presence of protocon)	1	0.857	1 --> 0
	22 (M1, protocone spur devel)	1	0.200	1 --> 0

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node_67 --> node_70          30 (M1, entoloph orientation)      1  0.700  0 --> 2
                             41 (M2, presence of distal p)      1  0.609  2 --> 1
node_70 --> Adelomyarion vir 22 (M1, protocone spur devel)      1  0.200  0 ==> 1
                             23 (M1, presence of mesial p)      1  0.167  0 --> 1
                             44 (M3, development of metac)      1  0.500  0 --> 1
                             67 (m3, presence of metaloph)      1  0.333  1 --> 0
node_70 --> node_69          23 (M1, presence of mesial p)      1  0.167  0 --> 1
                             24 (M1, presence of labial a)      1  0.250  1 ==> 0
                             44 (M3, development of metac)      1  0.500  0 --> 1
                             51 (m1, presence of metaconi)      1  0.600  1 ==> 0
                             55 (m1, presence of mesoconi)      1  0.542  1 ==> 2
node_69 --> node_68          50 (m1 protoconid position)        1  0.375  1 ==> 0
                             65 (m3 length relative to m1)      1  0.182  0 ==> 1
node_68 --> Edirnella kempen 15 (Cheek tooth elongated an)      1  0.500  0 ==> 1
                             23 (M1, presence of mesial p)      1  0.167  1 ==> 0
                             35 (M2 presence of anterolop)      1  0.833  1 ==> 2
                             41 (M2, presence of distal p)      1  0.609  1 ==> 2
                             43 (M2, sinus mesiolabial ex)      1  0.167  1 ==> 0
                             46 (m1, presence of anteroco)      1  0.714  1 ==> 0
                             53 (m1, presence of labial p)      1  0.727  0 ==> 1
                             62 (m2, metalophulid orienta)      1  0.857  1 ==> 0
node_68 --> Raricricetodon z 13 (Cheek tooth form)              1  0.500  1 ==> 0
                             21 (M1, presence of protocon)      1  0.857  0 ==> 1
                             26 (M1, presence of distal p)      1  0.833  1 ==> 0
                             41 (M2, presence of distal p)      1  0.609  1 ==> 0
                             49 (m1, presence of anterolo)      1  0.857  1 ==> 2
                             65 (m3 length relative to m1)      1  0.182  1 ==> 2
node_69 --> Oxynocricetodon  47 (m1, presence of metaloph)      1  0.556  1 ==> 0
                             49 (m1, presence of anterolo)      1  0.857  1 ==> 0
node_67 --> Kerosinia variab 30 (M1, entoloph orientation)      1  0.700  0 -->
(12)
                             41 (M2, presence of distal p)      1  0.609  2 -->
                             (01)
                             67 (m3, presence of metaloph)      1  0.333  1 --> 0
node_66 --> Heterocricetodon 7 (Upper Jaw, zygomatic plat)      1  0.333  1 --> 0
                             9 (Upper Jaw, incisive foram)      1  0.600  0 --> 1
                             18 (M1, presence of protosty)      1  0.667  1 ==> 0
                             21 (M1, presence of protocon)      1  0.857  1 --> 0
                             22 (M1, protocone spur devel)      1  0.200  1 --> 0
                             55 (m1, presence of mesoconi)      1  0.542  1 ==> 0
node_65 --> node_64          8 (Upper Jaw, shape of the I)      1  1.000  0 ==> 2
                             12 (Lower Jaw, orientation o)      1  0.800  1 --> 2
                             13 (Cheek tooth form)              1  0.500  0 --> 1
                             24 (M1, presence of labial a)      1  0.250  0 --> 1
                             30 (M1, entoloph orientation)      1  0.700  2 --> 0
node_64 --> node_63          47 (m1, presence of metaloph)      1  0.556  1 ==> 0
node_63 --> Ulaancricetodon  24 (M1, presence of labial a)      1  0.250  1 ==> 0
                             25 (M1, presence of protocon)      1  0.667  0 ==> 1
                             50 (m1 protoconid position)        1  0.375  1 ==> 0
                             65 (m3 length relative to m1)      1  0.182  0 ==> 1
node_64 --> Pseudocricetodon 55 (m1, presence of mesoconi)      1  0.542  1 ==> 0
node_62 --> node_46          1 (Lower Incisors, number of)      2  0.750  2 --> 0
                             2 (Lower Incisors, number of)      1  0.667  0 ==> 1
                             6 (Upper Jaw, zygomatic plat)      1  0.500  1 --> 0
                             7 (Upper Jaw, zygomatic plat)      1  0.333  0 --> 1
                             10 (Lower Jaw, diastema shap)      1  0.333  0 --> 1
                             11 (Lower Jaw, Ventral masse)      1  0.750  1 --> 2
                             12 (Lower Jaw, orientation o)      1  0.800  1 --> 0
                             19 (M1, presence of anteroco)      1  1.000  1 ==> 2
                             41 (M2, presence of distal p)      1  0.609  1 --> 2
                             62 (m2, metalophulid orienta)      1  0.857  1 ==> 0
node_46 --> node_39          18 (M1, presence of protosty)      1  0.667  1 ==> 0
                             51 (m1, presence of metaconi)      1  0.600  1 ==> 0
                             58 (m1, ectolophid long and )      1  0.333  0 --> 1
node_39 --> Aralocricetodon  55 (m1, presence of mesoconi)      1  0.542  1 ==> 2
node_39 --> node_38          17 (Cheek tooth enamel crenu)      1  0.500  0 ==> 1
                             44 (M3, development of metac)      1  0.500  0 ==> 1
node_38 --> Enginia gertchek 1 (Lower Incisors, number of)      1  0.750  0 ==> 1
                             3 (Lower Incisors, number of)      1  0.444  1 --> 0
                             20 (M1, size difference betw)      1  0.333  0 ==> 1
                             43 (M2, sinus mesiolabial ex)      1  0.167  1 ==> 0
                             54 (m1, presence of hypoconi)      1  0.167  0 ==> 1
                             58 (m1, ectolophid long and )      1  0.333  1 --> 0
                             65 (m3 length relative to m1)      1  0.182  0 ==> 1
node_38 --> Muhsinia steffen 53 (m1, presence of labial p)      1  0.727  0 ==> 1
node_46 --> node_45          9 (Upper Jaw, incisive foram)      1  0.600  0 --> 1
                             27 (M1, presence of metacone)      1  0.600  0 ==> 1
                             42 (M2, presence of metacone)      1  0.750  0 ==> 1
                             43 (M2, sinus mesiolabial ex)      1  0.167  1 ==> 0
                             54 (m1, presence of hypoconi)      1  0.167  0 --> 1
                             57 (m1 hypolophulid orientat)      1  0.714  2 ==> 1
                             60 (m1, X-shaped intersectio)      1  0.333  0 --> 1
                             63 (m2 presence of hypoconid)      1  0.200  0 --> 1
                             64 (m2 hypolophulid orientat)      1  0.800  2 ==> 1
node_45 --> node_42          16 (Cheek tooth paired cusps)      1  1.000  0 ==> 1
                             17 (Cheek tooth enamel crenu)      1  0.500  0 ==> 1
node_42 --> node_41          23 (M1, presence of mesial p)      1  0.167  0 ==> 1
                             34 (M1 , deep fossette enclo)      1  1.000  0 ==> 1
                             44 (M3, development of metac)      1  0.500  0 --> 1
node_41 --> node_40          20 (M1, size difference betw)      1  0.333  0 ==> 1
                             37 (M2 , deep fossette enclo)      1  1.000  0 ==> 1
                             53 (m1, presence of labial p)      1  0.727  0 ==> 1
                             60 (m1, X-shaped intersectio)      1  0.333  1 --> 0
node_40 --> Cricetops dormit 2 (Lower Incisors, number of)      1  0.667  1 ==> 0
                             3 (Lower Incisors, number of)      1  0.444  1 --> 0
                             9 (Upper Jaw, incisive foram)      1  0.600  1 --> 0
                             18 (M1, presence of protosty)      1  0.667  1 ==> 0
                             51 (m1, presence of metaconi)      1  0.600  1 ==> 0
                             52 (m1, presence of addition)      1  1.000  0 ==> 1
node_40 --> PARACRICETOPS VI 10 (Lower Jaw, diastema shap)      1  0.333  1 ==> 0
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                          11 (Lower Jaw, Ventral masse)      1  0.750  2 --> 1
                          33 (M1 and M2, small cingulu)      1  0.600  0 ==> 1
                          40 (M2, presence of protocon)      1  0.333  0 ==> 1
                          44 (M3, development of metac)      1  0.500  1 --> 0
                          55 (m1, presence of mesoconi)      1  0.542  1 ==> 2
                          58 (m1, ectolophid long and )      1  0.333  0 ==> 1
node_41 --> Deperetomys inte 24 (M1, presence of labial a)      1  0.250  0 ==> 1
                          31 (M1, root number [ordered)      1  0.667  0 ==> 1
                          43 (M2, sinus mesiolabial ex)      1  0.167  0 ==> 1
                          65 (m3 length relative to m1)      1  0.182  0 ==> 1
                          66 (m3 distal reduction)           1  0.667  1 ==> 0
node_42 --> Meteamys alpani  18 (M1, presence of protosty)      1  0.667  1 ==> 0
                          55 (m1, presence of mesoconi)      1  0.542  1 ==> 2
node_45 --> node_44          3 (Lower Incisors, number of)      1  0.444  1 --> 0
                          13 (Cheek tooth form)              1  0.500  0 ==> 2
                          14 (Cheek tooth crown height)      1  0.333  0 --> 1
                          41 (M2, presence of distal p)      2  0.609  2 ==> 0
                          55 (m1, presence of mesoconi)      1  0.542  1 --> 0
                          57 (m1 hypolophulid orientat)      1  0.714  1 --> 0
                          64 (m2 hypolophulid orientat)      1  0.800  1 --> 0
                          66 (m3 distal reduction)           1  0.667  1 ==> 0
node_44 --> node_43          20 (M1, size difference betw)      1  0.333  0 ==> 1
                          31 (M1, root number [ordered)      1  0.667  0 ==> 1
                          35 (M2 presence of anterolop)      1  0.833  1 ==> 2
                          54 (m1, presence of hypoconi)      1  0.167  1 --> 0
                          60 (m1, X-shaped intersectio)      1  0.333  1 --> 0
                          63 (m2 presence of hypoconid)      1  0.200  1 --> 0
                          65 (m3 length relative to m1)      1  0.182  0 ==> 1
node_43 --> Melissiodon quer 13 (Cheek tooth form)              1  0.500  2 ==> 1
                          14 (Cheek tooth crown height)      1  0.333  1 --> 0
                          15 (Cheek tooth elongated an)      1  0.500  0 ==> 1
                          27 (M1, presence of metacone)      1  0.600  1 ==> 0
                          31 (M1, root number [ordered)      1  0.667  1 ==> 2
                          48 (m1, presence of metastyl)      1  1.000  0 ==> 1
                          50 (m1 protoconid position)        1  0.375  1 ==> 0
                          53 (m1, presence of labial p)      1  0.727  0 ==> 1
                          55 (m1, presence of mesoconi)      2  0.542  0 ==> 2
node_43 --> Selenomys mimicu 2 (Lower Incisors, number of)      1  0.667  1 ==> 0
                          18 (M1, presence of protosty)      1  0.667  1 ==> 0
                          51 (m1, presence of metaconi)      1  0.600  1 ==> 0
                          57 (m1 hypolophulid orientat)      1  0.714  0 --> 1
                          64 (m2 hypolophulid orientat)      1  0.800  0 --> 1
                          65 (m3 length relative to m1)      1  0.182  1 ==> 2
node_60 --> node_50          3 (Lower Incisors, number of)      2  0.444  2 --> 0
                          8 (Upper Jaw, shape of the I)      1  1.000  0 ==> 1
                          21 (M1, presence of protocon)      1  0.857  1 --> 0
                          30 (M1, entoloph orientation)      1  0.700  2 ==> 0
                          41 (M2, presence of distal p)      1  0.609  1 --> 0
                          47 (m1, presence of metaloph)      1  0.556  0 --> 1
                          49 (m1, presence of anterolo)      1  0.857  0 --> 1
                          55 (m1, presence of mesoconi)      1  0.542  2 --> 1
                          65 (m3 length relative to m1)      2  0.182  2 --> 0
node_50 --> Atavocricetodon  23 (M1, presence of mesial p)      1  0.167  0 ==> 1
                          63 (m2 presence of hypoconid)      1  0.200  1 --> 0
node_49 --> Eucricetodon asi 10 (Lower Jaw, diastema shap)      1  0.333  0 ==> 1
                          55 (m1, presence of mesoconi)      1  0.542  1 ==> 2
node_49 --> node_48          18 (M1, presence of protosty)      1  0.667  1 --> 0
                          22 (M1, protocone spur devel)      1  0.200  1 ==> 0
node_48 --> node_47          3 (Lower Incisors, number of)      1  0.444  0 --> 1
                          4 (Lower Incisors, presence )      1  1.000  0 ==> 1
node_47 --> Eucricetodon cad 36 (M2, presence of protocon)      1  0.250  0 ==> 1
node_47 --> Eucricetodon lon 3 (Lower Incisors, number of)      1  0.444  1 ==> 2
                          11 (Lower Jaw, Ventral masse)      1  0.750  1 ==> 0
node_59 --> Witenia fusca    28 (M1, presence of protocon)      1  0.500  1 --> 0
                          36 (M2, presence of protocon)      1  0.250  1 --> 0
                          38 (M2, presence of protocon)      1  1.000  1 --> 0
                          39 (M2, presence of entoloph)      1  0.875  0 --> 1
                          46 (m1, presence of anteroco)      1  0.714  1 ==> 0
                          50 (m1 protoconid position)        1  0.375  1 ==> 0
                          63 (m2 presence of hypoconid)      1  0.200  1 --> 0
node_58 --> node_57          1 (Lower Incisors, number of)      2  0.750  3 --> 1
                          14 (Cheek tooth crown height)      1  0.333  0 ==> 1
                          23 (M1, presence of mesial p)      1  0.167  1 --> 0
                          27 (M1, presence of metacone)      1  0.600  0 ==> 1
                          33 (M1 and M2, small cingulu)      1  0.600  0 --> 1
                          42 (M2, presence of metacone)      1  0.750  0 ==> 1
                          43 (M2, sinus mesiolabial ex)      1  0.167  1 ==> 0
                          45 (M3, presence of protocon)      1  1.000  0 ==> 1
                          49 (m1, presence of anterolo)      1  0.857  0 --> 1
                          54 (m1, presence of hypoconi)      1  0.167  0 --> 1
                          55 (m1, presence of mesoconi)      1  0.542  1 --> 2
node_57 --> Paracricetodon d 46 (m1, presence of anteroco)      1  0.714  1 ==> 0
                          49 (m1, presence of anterolo)      1  0.857  1 --> 0
node_57 --> Paracricetodon s 44 (M3, development of metac)      1  0.500  0 ==> 1
                          57 (m1 hypolophulid orientat)      1  0.714  2 ==> 1
node_57 --> Trakymys saratji 33 (M1 and M2, small cingulu)      1  0.600  1 --> 0
                          41 (M2, presence of distal p)      2  0.609  0 ==> 2
node_56 --> Pappocricetodon  6 (Upper Jaw, zygomatic plat)      1  0.500  0 --> 1
                          7 (Upper Jaw, zygomatic plat)      1  0.333  1 --> 0
                          12 (Lower Jaw, orientation o)      1  0.800  2 --> 1
                          25 (M1, presence of protocon)      1  0.667  1 --> 0
                          26 (M1, presence of distal p)      1  0.833  0 --> 1
                          41 (M2, presence of distal p)      1  0.609  0 -->
                          (12)
                          47 (m1, presence of metaloph)      1  0.556  0 ==> 1
                          50 (m1 protoconid position)        1  0.375  0 --> 1
                          51 (m1, presence of metaconi)      1  0.600  0 --> 1
                          59 (m1, development of ectol)      1  0.875  0 --> 1
                          63 (m2 presence of hypoconid)      1  0.200  0 --> 1
node_55 --> Raricricetodon m 22 (M1, protocone spur devel)      1  0.200  1 ==> 0
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                            30 (M1, entoloph orientation)      1  0.700  0 --> 2
                            36 (M2, presence of protocon)      1  0.250  1 ==> 0
                            40 (M2, presence of protocon)      1  0.333  1 --> 0
                            44 (M3, development of metac)      1  0.500  0 ==> 1
                            55 (m1, presence of mesoconi)      1  0.542  2 --> 1
node_54 --> Pappocricetodon  5 (Upper P4 presence)             1  1.000  1 --> 0
                            18 (M1, presence of protosty)      1  0.667  1 ==> 0
                            28 (M1, presence of protocon)      1  0.500  0 --> 1
                            29 (M1, presence of entoloph)      1  1.000  0 --> 1
                            32 (M1, presence of mesial l)      1  1.000  0 --> 1
                            35 (M2 presence of anterolop)      1  0.833  0 --> 1
                            39 (M2, presence of entoloph)      1  0.875  0 ==> 1
                            41 (M2, presence of distal p)      1  0.609  0 -->
                            (12)
                            47 (m1, presence of metaloph)      1  0.556  0 ==> 1
                            54 (m1, presence of hypoconi)      1  0.167  0 ==> 1
                            56 (m1, development of hypol)      1  0.667  0 --> 1
                            61 (m2, presence of metaloph)      1  1.000  0 --> 1
node_53 --> Palasiomys conul 36 (M2, presence of protocon)     1  0.250  0 --> 1
                            59 (m1, development of ectol)      1  0.875  0 --> 1
                            65 (m3 length relative to m1)      1  0.182  1 --> 2
                            67 (m3, presence of metaloph)      1  0.333  0 --> 1
node_52 --> Pappocricetodon  18 (M1, presence of protosty)     1  0.667  0 --> 1
                            19 (M1, presence of anteroco)      1  1.000  0 --> 1
                            22 (M1, protocone spur devel)      1  0.200  0 --> 1
                            23 (M1, presence of mesial p)      1  0.167  1 ==> 0
                            43 (M2, sinus mesiolabial ex)      1  0.167  0 --> 1
                            50 (m1 protoconid position)        1  0.375  1 --> 0
                            56 (m1, development of hypol)      1  0.667  0 --> 1
node_51 --> Banyuesminthus u 40 (M2, presence of protocon)     1  0.333  1 ==> 0
node_51 --> Primisminthus yu 65 (m3 length relative to m1)     1  0.182  1 ==> 0
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